Orlando Bank Gets 540-Ton Year-Round Hydronic System *Pg. 9*

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Remote Control On '61 Admiral Room Cooler

CHICAGO — The 1961 Admiral room air conditioner line features what is billed as "the world's only wireless remote control" and is highlighted by greater cooling capacity than last year's models, the company announced.

The remote control unit can perform 13 different operations and does not have any cable or wire connections.

B. H. Melton, vice president-appliance division, Admiral Sales Corp., described the "Super-Son-R" wireless remote control as similar to that used on Admiral's 19 and 23-in. television receivers.

"The Son-R power amplifier in the air conditioner has seven transistors and one diode and is always ready to receive the signal from the compact two-button Son-R hand unit," it was pointed out.

Melton also announced that two new dehumidifiers have been introduced by Admiral Sales at its newest entries in the home appliance field.

Highlighting the 1961 Admiral refrigerator line is a new

(Continued on Back Page, Col. 1)

'Ideas for Living'

GM Sets Sights on Home Cooling Market Through Delco Appliance

NEW YORK CITY — In its "Ideas for Iiving" exhibit which is a highlight of the 1961 GM Motorama, General Motors Corp. has made it clear that it is still very much in the field of central residential air conditioning, and that no attacks by critics who shout that there is "waste" in the improvement and refinement of appliances and equipment for U. S. homes will deter GM from using all its resources to accomplish that very thing.

"We are going to encourage the modern American woman to acquire, according to her individual taste and means, some of the things that will help make life better and more rewarding for herself and her family," declared Nelson C. Dezendorf, GM vice president in charge of the Dayton and Household Appliance group.

"In spite of a few critics we, at General Motors, see nothing perverse, for example, in the fact that she likes to be cool in the summer and warm in the winter, and we do not feel that we are encouraging self-indulgence by providing a central sys-

(Continued on Page 29, Col. 1)

Welbilt To Sell Through Reps

FARMINGDALE, N. J. — A new approach to the marketing of its equipment was announced by John E. Craig, newly-appointed general sales manager of Welbilt Air Conditioning & Heating Corp.

He said manufacturers' representatives will be selected to handle sales of Welbilt products to the distributor and dealer markets across the country.

C. M. (Pete) Hatcher, long associated in the air conditioning and refrigeration industry, has been named field sales manager of Welbilt, he said. Hatcher will assist in developing field representatives.

"The emphasis of our sales effort will be on serving our coast-to-coast network of geographically protected franchised

(Continued on Page 29, Col. 5)

Stage Forum on Auto Air Conditioning

DALLAS — Program for the seventh annual National Forum on Auto Air Conditioning, to be held Nov. 17-18 at the Sheraton hotel, has been announced.

The meeting is sponsored by the Texas Section, Society of Automotive Engineers, in conjunction with the Automotive Air Conditioning Manufacturers Association. It will include component supplier exhibits.

Forum panels will cover major fields of interest through discussion groups, after which open-floor discussion will be

(Continued on Page 4, Col. 1)

Happy With Successful '60, ARW Plans More Active '61

By Phil B. Redeker

ABOARD S.S. HANSEATIC —In the coming year, the Air Conditioning & Refrigeration Wholesalers association, organization of independent supplies wholesalers will continue and expand its program of actively promoting its "identity" to both its suppliers and customers, and also plans to embark on a program of study and education aimed at making its members more efficient wholesalers and insuring the perpetuation of their individual businesses.

These were among the principal decisions made at the "25th anniversary" meeting of ARW, held on the cruise ship *S.S. Hanseatic* sailing in the Caribbean.

The cruise convention was a special event celebrating the association's Silver Anniversary, and it could also be said to mark one of the organization's most active and successful years.

For its 25th anniversary year, ARW had set a goal of 27 new members, and as of the first of November, 27 new members had been brought into the fold since the first of the year. This brought the total number of dues paying members of ARW to 217, representing 484 supplies wholesaler locations, the highest membership total in the history of the association. Membership committee was headed by E. S. Diggle, Henry V. Dick Co., Columbia, S. C.

Thom Muir, who has been executive director of ARW since the fall of 1959, was made executive vice president in an action of the membership, and

(Continued on Page 18, Col. 1)

Air Conditioned Subdivisions

Heat Pumps Installed In Florida Homes

FORT LAUDERDALE, Fla. —What may eventually be a 1,500 - home subdivision of custom - built homes heated and cooled by heat pump was opened to the public here last month by Haft-Gaines Co., builder.

Showing 10 model homes, all air conditioned by General Electric "Weathertrons," the company reported that 50 homes were sold in the four days *prior* to the official opening on Oct. 9. More than 40,000 people were clocked through the homes on opening day.

Prices of homes planned for the Imperial Point subdivision range from $16,490 to $28,900, including air conditioning,

(Continued on Page 29, Col. 4)

Cooling Is Standard In Long Island Tract

MINEOLA, N. Y. — What is claimed will be "the largest and first moderately priced development" of new homes on Long Island to include central air conditioning as a standard feature is being built by The Osias Organization.

Richard A. Osias, president, said he has launched the $18,-000,000 project because he believes the New York home-buyer wants a fully air conditioned house, but wants it at the right price and does not want to pay extra for the air conditioning.

The 800 two-story colonial and high-level ranch houses in the new development, he said,

(Continued on Page 29, Col. 4)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

What's the Score?

Conventioneering aboard a Caribbean cruise ship was an unparalleled experience for stimulated members of the Air Conditioning & Refrigeration Wholesalers association.

(We'll have more to offer in this column about that collective experience in subsequent issues.)

There were minor frustrations and irritations, to be sure, such as always occur in any mass movement of highly individualistic human beings.

Biggest gripe centered around inadequate communications, and focussed on lack of football scores.

The *S.S. Hanseatic*, out of Hamburg, was staffed entirely by German personnel, you see.

Admirable though they were, they couldn't comprehend that ARW businessmen were concerned—seriously—about how Iowa, Minnesota, Michigan State, Purdue, Duke, Illinois, Alabama, Florida, and Tennessee football teams had fared on a Saturday during which rabid ARW partisans had been at sea.

Up to the ship's radio shack was sent a petition:

"Please print the football scores in tomorrow's *Hanseatic News.*"

The soccer-minded Deutchers obliged, as follows:

Blackpool 3, Liverpool 2. Falmouth 4, Cesspool 1, etc.

"Dope" assuaged taut feelings by recounting the following *American* football anecdotes to deck-chair groups.

* * *

Cocktail Party Conversation

Hard to believe, but Oakland Junior college (California) fielded a one-legged quarterback in 1957. Name: Earl Norwood.

After stepping on a land mine in Korea his right leg was am-

(Continued on Page 14, Col. 1)

Arkla Has 3½-Ton Gas Air Conditioner

LITTLE ROCK, Ark.—Arkla Air Conditioning Corp. is in production on its new "Sun Valley" model 500C gas air conditioning unit, according to W. R. Stephens, president.

Stephens said the versatile 3½-ton model is the first in a new line of gas-fired absorption-type chilled-hot water central air conditioning systems to be manufactured by Arkla. Other capacities are being developed for introduction in the near future, he added.

Available with the new unit is a companion fan-coil-filter assembly, the Arkla model FCF-42-96, which allows flexibility of installation and coil and duct arrangement.

"With the model 500C and subsequent units, we are utilizing the proven no-moving-parts heat absorption principle, developed and advanced by Arkla and pioneered by Servel, Inc., its predecessor, in an entirely new air conditioning applica-

(Continued on Page 4, Col. 1)

RSES OFFICERS and directors for 1961 are (l. to r.): *Front row:* Michael Rudka, sergeant-at-arms; Charles Bell, treasurer; J. Lawrence Hall, second vice president; Paul Darby, president; Carl Howenstine, first vice president; H. T. McDermott, secretary; and John H. Spence, chairman of the educational examining board. *Back row:* (all directors) J. Robert Bonebrake, Robert M. Duke, Ralph Porter, Leo Zelen, William Goeckel, Lloyd Reed, Al Pike, Otto Grossman, and A. J. Lane.

Agreement Separates Construction, Service Pay Scales In So. California

LOS ANGELES—A two-year working agreement which separates pay schedules into service and construction classifications has been signed between the Refrigeration & Air Conditioning Contractors Association of Southern California and the Refrigeration Fitters Branch of Local 250, United Association.

The announcement was made recently by Henry B. Ely, executive secretary of the contractor's group.

The new contract sets forth agreement between labor and management concerning wages, vacation, pension, educational training, and other benefits for the more than 950 journeymen and apprentices of the refrigeration and air conditioning industry in Los Angeles and Orange Counties.

Effective as of Sept. 1, the labor agreement calls for an hourly increase over the previous contract for journeymen involved with service work. The contract also gives an additional raise effective Sept. 1, 1961.

Journeymen on construction work will receive a slightly higher rate with an increase at the start of the second year of the agreement.

The separation of pay schedules into service and construction classifications represent a departure from previous contracts which established only a single hourly rate for both types of work.

Men who have been certified by the Joint Journeymen & Apprentice Training Committee as certified journeymen will receive an extra amount over the hourly rate for refrigeration fitters.

Employes also received increased benefits in regard to vacations and pensions. The contract includes payment of 20 cents an hour for the employe vacation fund by employers with the amount increased to 22 cents on Sept. 1, 1961. Previously, employers paid an established percentage of the employes gross wages into the vacation fund.

Also covered in the working benefits is the furtherance of the journeymen and apprentice training programs to provide skilled manpower for the refrigeration and air conditioning industry of Southern California. The contractors contribute 15 cents per hour to the training programs for all uncertified journeymen and foremen on their payrolls.

Gene Ballard, business manager for the Refrigeration Fitters Branch of Local 250, UA, commented that he believes the new agreement brings wages and other benefits in line with the current cost of living in Southern California.

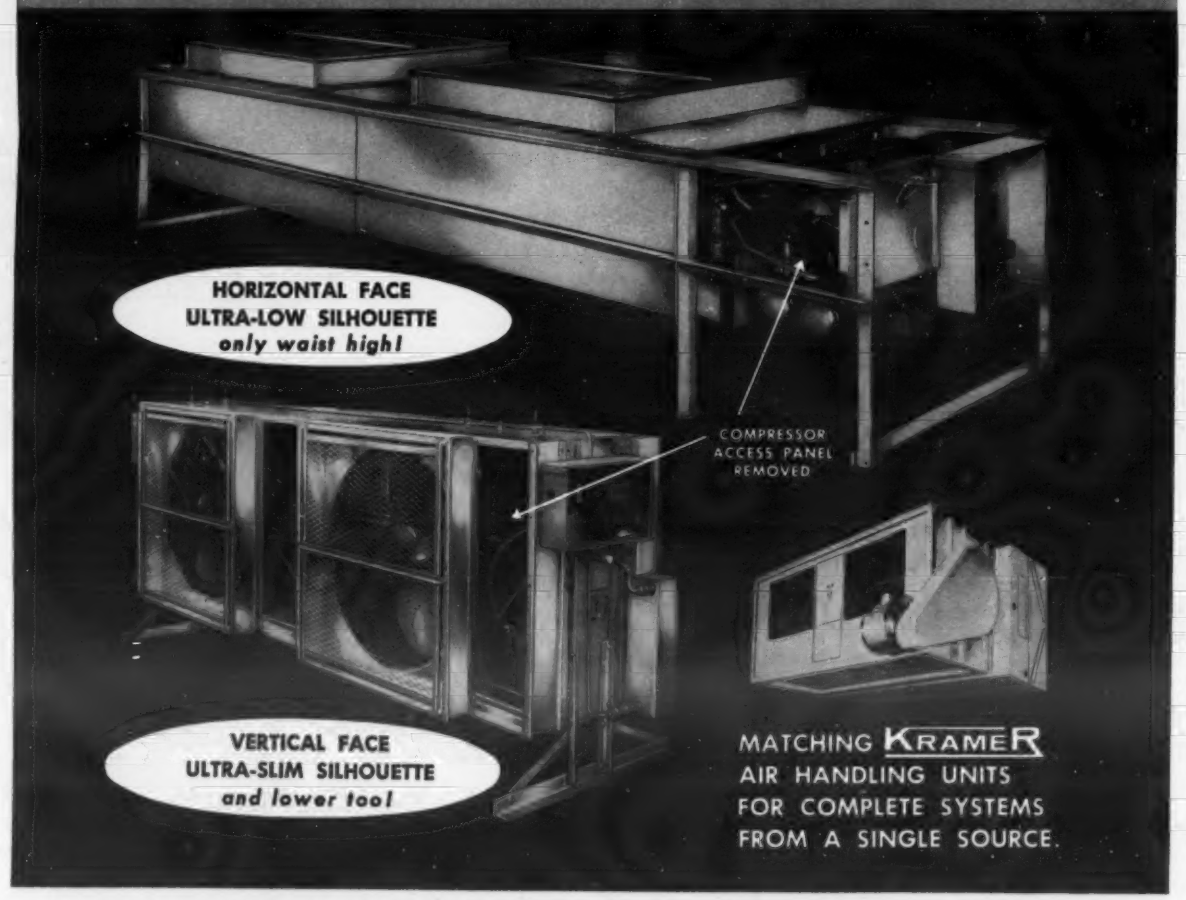
"It is the feeling of management that the new working agreement is a major contribution towards better relations between the union and association members. The contract, in our opinion, is a fair and equitable agreement for all," stated Henry Ely.

From the leader in air-cooled condensing

the new KRAMER

UNICON-COMPRESSOR

PACKAGED *WATER-FREE* CONDENSING UNIT



3 *to* 70 TONS—HORIZONTAL *or* VERTICAL FACE

The low, slim-trim lines of the new Kramer air-cooled UNICON-COMPRESSOR give it unequaled flexibility in any architectural setting. Space saving outdoor design and low, low operating weight combine to reduce structural and engineering problems. Easy and economical to install, the complete packaged UNICON-COMPRESSOR has matchless accessibility for servicing. Its corrosion resistant aluminum casing, and its frame galvanized after fabrication, eliminate painting maintenance.

And remember—no place in the U. S. A. is too hot (or too cold) for the UNICON-COMPRESSOR. With the patented Kramer Winterstat it will operate any time of the year, without adjustment, even in the dead of winter.

Write for bulletin C460B.

KRAMER TRENTON CO., Trenton 5, N. J.

47 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

Serviceman Trapped 2½ Hours In Freezer

PHILADELPHIA — Trapped for more than 2½ hours in the inner compartment of a local restaurant's walk-in freezer, a refrigeration serviceman finally was rescued after hurling cans and other food containers at the door to get attention.

Repairman Robert Eberle had entered the freezer in the basement at the Howard Johnson Restaurant at Adams Ave. and Roosevelt Blvd. on a service call. After going into the narrow, 8-ft-long inner compartment, the door clanged shut behind him. Efforts to open the door by operating the safety catch proved fruitless.

So Eberle heaved various food containers at the door until the continuing racket finally prompted a waitress to investigate. She released the white and shaking but still conscious repairman. He was given emergency treatment at the restaurant, then treated for shock and exposure at the hospital.

J. Richards, Columbia Specialty Pres., Dies

WASHINGTON, D. C.—Joseph Richards, Sr., 78, president of Columbia Specialty Co., Bethesda, Md., manufacturer of air conditioning and heating equipment, died Oct. 30 after a short illness. He was a member of the first U. S. Olympic Games track team which participated in the games of 1900.

FIRST line of welded hermetics to offer

INTERNAL INHERENT

ACROSS-THE-LINE

MOTOR PROTECTION

4U Copelaweld®

WELDED HERMETIC MOTOR-COMPRESSORS

Single phase and three phase

The 4U Copelaweld is the first welded motor-compressor in the industry to offer internal, inherent across-the-line motor protection. It is hermetically sealed inside the shell! It cannot be tampered with, by-passed or changed. No pilot circuits are required . . . no external current or temperature-sensitive devices are needed.

Close proximity of the protector to the motor provides superior locked-rotor and running protection and is independent of external ambient conditions.

QUIET, VIBRATION-FREE OPERATION . . . assured by Copelaweld's low-speed, four-cylinder design, cast-in discharge muffler, and internal spring mountings.

LASTING DEPENDABILITY . . . made possible by use of light-weight reciprocating parts, positive lubrication system, and other proven Copeland design features.

4 cylinders • 1750 R. P. M.

2½ H. P. • 3 H. P. • 3½ H. P.

4 H. P. • . . . and now 5 H. P.

Whether you're concerned with improving today's air conditioners and heat pumps or creating new designs for the future, you should know what the 4U Copelaweld has to offer. Request Bulletin No. 6026. Call or write direct.

Welded Hermetics,
Accessible Hermetics
or Belt-Driven . . .
COPELAND has
what it takes!

SINCE 1918 Copeland REFRIGERATION CORPORATION, Sidney, Ohio

Auto Cooling--

(Continued from Page 1, Col. 2)

held. The program follows:

THURSDAY, NOV. 17

1:45-3 p.m.—General Automotive Design Considerations. Moderator: William E. Lind, Sr., president, Lindustries, Inc.

"How Does Peugeot Study Automotive Vibration Problems?" M. Bouquet, manager, Societe Anonyme des Automobiles Peugeot, France; M. Genestier, assistant manager.

"Development of the Air Cushion Vehicle and Its Future Applications," George W. Johnston, senior research engineer, Bell Helicopter Corp.

"The 6-Cylinder Aluminum Die-Cast Block," John Adamson, Automotive Div., American Motors Corp.

3:30-4:45 p.m.—Engine and Assembly Cooling. Moderator: King A. Koch, owner, Koch Engineering.

"Radiators and Condensers," Pete Kohler, western sales manager, Radiator Div., Modine Mfg. Co.

"Variable Speed Fan Blades," Lou Selin, Pump Div., Eaton Mfg. Co.

"Over-all Engine Cooling Problems," W. H. Jackson, senior engineer, Harrison Div., General Motors Corp.

4:45-6 p.m.—Passenger Compartment Noise and Vibration Considerations. Moderators: Howard E. Roberts, president, Parkomat Mfg. Co., Inc.; W. E. Anglin, president, Capitol Refrigeration, Inc.

"Physiological Effects of Noise," Dr. Charles Geil, Chance Vought, Inc.

"Fundamentals of Noise," Lloyd King or Paul Petty, Chance Vought.

"Sources of Noise: The Problems—the Solutions," Anwar A. Atalla, chief engineer, Torrington Mfg. Co., Western Div.

FRIDAY, NOV. 18

9-10:15 a.m.—Drive Components. Moderator: Preston Hazzard, design engineer, John E. Mitchell Co.

"Textile Cord or Steel Cable Belt Construction for A.C. Applications," Robert E. Stetson, engineer, original equipment sales, Gates Rubber Co.

"Testing Standards for Magnetic Clutches In Compressor Drives," Frank Skelton, senior project engineer, Warner Electric Brake & Clutch Co.

"Field Service Problems 1,500 Miles from the Factory," William Winkelman, Johnnie & Mack, Miami, Fla.

"High Side System Pressures," Edd Huff, service manager, John E. Mitchell Co.

10:45-noon—Compressors. Moderator: R. B. Ebbets, mechanical engineer, Frigikar Corp.

"Compressor Trends," Robert G. Anderson, sales and engineering, and E. R. Boynton, chief engineer of automotive and commercial compressors, Tecumseh Products Co.

"York Automotive Compressor for 1961, and, Capacity Control Application," D. G. Harter, director of engineering, Decatur Works, and T. J. Ammel, sales manager, O.E.M. and Mobile Products, York Div.

1:45-3 p.m.—Developments In Thermoelectric Design. Moderator: H. Dale Jordan, secretary-treasurer, Frigiquip Corp.

"Engineering Priciples of Thermoelectric Cooling," W. H. Clingman, head, Thermoelectric Section, Device Research Dept. of Central Research Laboratory, Texas Instruments.

"Application of Thermoelectric Cooling," Ray Marlow, project engineer, App. Div., Texas Instruments.

Open forum leader—R. L. Maier, chief engineer, Frigiquip Corp.

3:30-4:45 p.m.—Electrical and Control Systems. Moderator: A. P. Brandimarte, chief engineer, A.R.A. Mfg. Co.

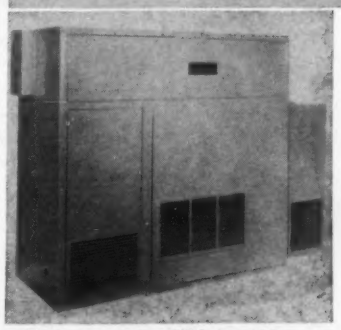
"A. C. Generators," Robert G. Hill, sales manager, Leece-Neville Co.

"Control Systems," Del C. Albright, products manager, Refrigeration & Air Conditioning Controls Div., Controls Co. of America; T. E. Noakes, chief engineer, Detroit Controls Div.

4:45-6 p.m.—Design for Compact and Foreign Cars. Moderators: W. E. Sala, manager, After-Market Products, Heater Div., Eaton Mfg. Co.; John Clardy, partner, Clardy Mfg. Co.

—W. H. Jackson, Harrison Div., General Motors Corp.; R. F. Jensen, American Motors Corp.; R. W. Gilmore, Airtemp Div.; M. Bouquet.

ARKLA MODEL FCF-42-96 chilled-hot water fan-coil-filter assembly has reversible and movable components to permit counterflow operation from either side. The symmetrical fan section can be rotated for horizontal or up or down vertical air flow.



ARKLA's new model 500C Sun Valley gas air conditioning unit permits the remote outside installation of a complete gas cooling and heating system.

Arkla--

(Continued from Page 1, Col. 5)

tion," said Stephens. "The result is a revolutionary and highly flexible gas cooling and heating system."

The Arkla model 500C, rated at 42,000 Btuh cooling and 96,000 Btuh heating, permits the remote outside installation of a complete year-round combination gas cooling-heating system, thus requiring no usable interior floor space. It circulates chilled or hot water, depending on season, to a fan-coil-filter assembly in a closet, attic, crawl space, or other convenient inside location.

In addition to a conventional forced-air central system with a wide variety of duct and coil arrangements, the model 500C makes possible individual room control, baseboard radiation, ceiling or floor radiation, and other air conditioning applications, the announcement said. It may also serve as an "add-on" for cooling only.

"The new model 500C retains the operating economy and constant efficiency of liquid cooling while eliminating the need for a separate evaporative cooler," it was stated. "The evaporative cooler and related equipment are compactly encased inside its all-weather panels with the refrigeration and heating system.

Air Handling Units

First in a series of air-handling units for residential or small commercial use, the model FCF-42-96 fan-coil-filter unit may be used as a companion to the model 500C or with other similar cooling-heating systems. Additional fan-coil-filter models are advancing through the development stage.

The FCF is a completely reversible unit. Plumbing connections (inlet and outlet water and condensate drain), filter removal, fan motor and pulley, electrical connection and access panels may be converted to permit counterflow operation from either side, with access required only to one side.

The entire assembly is in two parts for ease of movement through small openings. The filter-coil section may be located remotely from the fan section and connected with ductwork. The fan section is symmetrical and can thus be rotated to deliver air horizontally or vertically, either upward or downward. When located vertically, a simple box plenum may be attached directly above the entire assembly. When horizontal, a grille box may be connected.

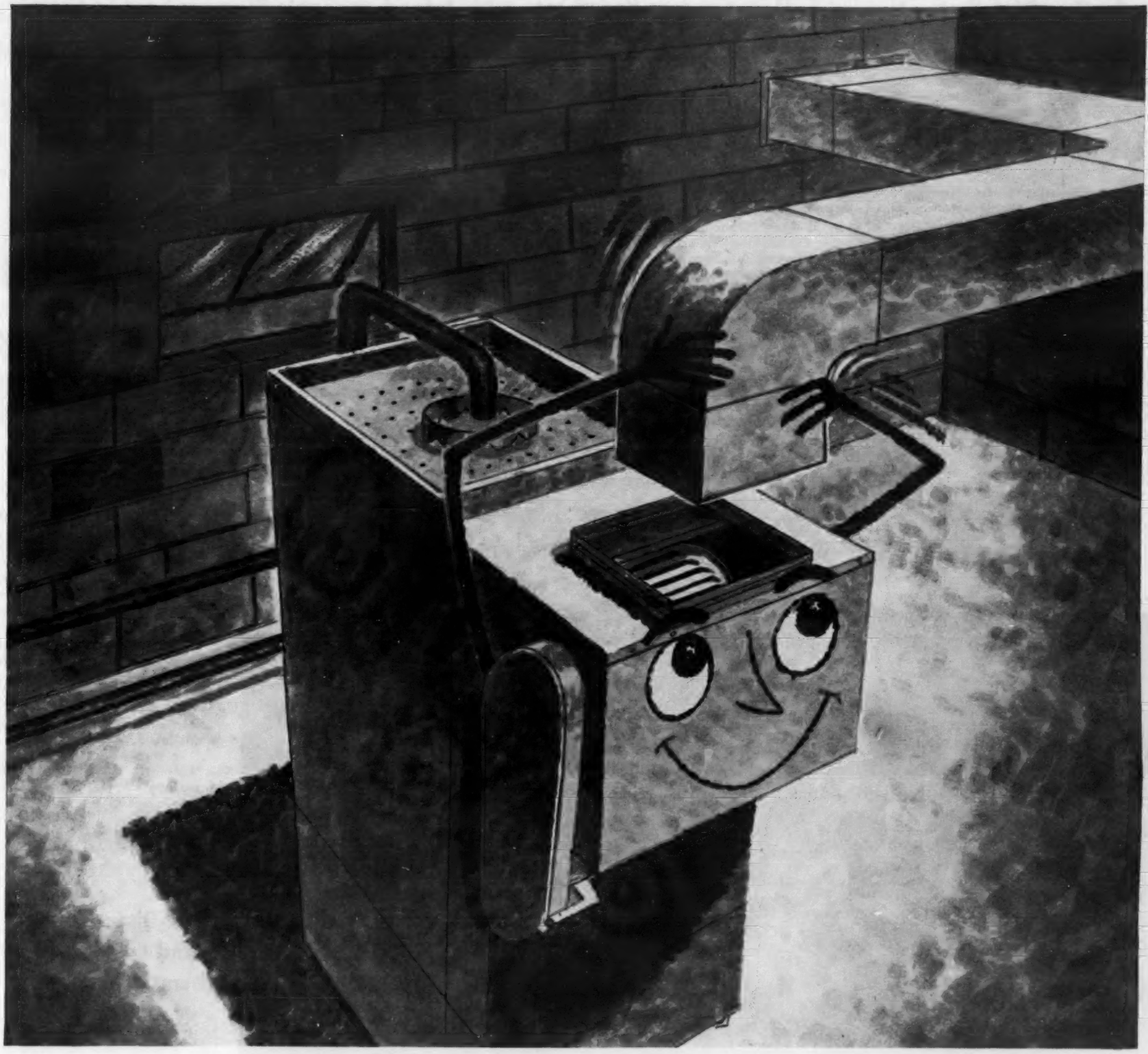
On cooling, the Arkla FCF-42-96 is rated at 42,000 Btuh at standard 80° dry bulb and 67° wet bulb (1,400 cfm) inlet air and 45° inlet water at 8.4 gpm (net capacity after deducting for motor heat). On heating, the 96,000 Btuh rating is based on 70° inlet air and 160° inlet water.

We've hitched our Star to a Wagon

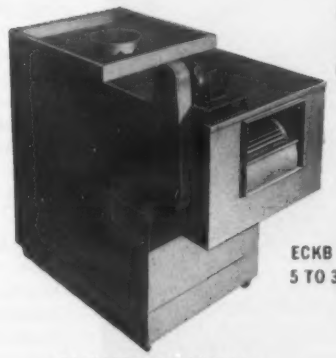
Quality is . . . as quality does. When our specialized manufacturing methods and ultra precision controls produce the fine thin wall copper tube for which Viking is known, a symbol should present our appreciation of this achievement. Does our "star product" carefully being placed in a Rolls Royce chauffered by three of Viking's top executives get this idea across to you quickly?

VIKING copper tube co.
CLEVELAND 10, OHIO

The 1937 Phantom III, 12-cylinder Rolls Royce is a Classic. Formerly belonging to the Lord Mayor of Kingston-on-Hull, it is now in our service. Viking personnel, however, drive American made cars.



Need a cooling tower that can handle ductwork?



ECKB SERIES
5 TO 30 TONS

Choose Halstead & Mitchell with horizontal or vertical discharge centrifugal fans

The quiet-running centrifugal fan in these Halstead & Mitchell cooling towers handles ductwork air friction without strain, pain, fuss or muss!

Proper air flow is maintained against the high, internal resistances of long duct runs when the cooling tower must be installed indoors.

H&M towers are available with horizontal discharge (ECKB Series) or vertical discharge (ECKVB Series) in capacities of 5 to 30 tons. Towers can be shipped as Take-Aparts, too, if specified at time of ordering.

Phone your local distributor for Bulletin ECKB-601 with complete information, or write to Halstead & Mitchell Co., Bessemer Building, Pittsburgh 22, Pa.

HM
Halstead & Mitchell

Cooling Towers • Water-Cooled Condensers • Air-Cooled Condensers • Air Handlers • Finned Coils

Perfection Distributor Named In Houston

CLEVELAND—Strengthened distribution in the Texas market for the Perfection line of residential air conditioning, heat pump, and furnace products was indicated by the announcement that the Hupp Corp. division has named J. A. Walsh & Co., Houston, as the exclusive distributor for the Perfection line in the Houston trading area.

"This gives us complete coverage of the Texas market," Carl W. Millsom, sales vice president, said in making the announcement of the appointment.

Besides the new Houston distributor, Millsom also announced two other appointments:

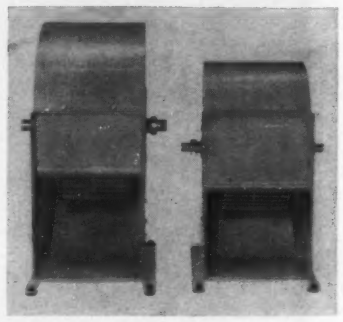
Central Air Conditioning, Inc., Memphis, as distributor for the heating, heat pump, and air conditioning products in Memphis and nearby Arkansas and Mississippi, and Dunbar Metal & Supply Co., Spring Hill Station, Charleston, W. Va., to handle distribution in the Charleston-Huntington area.

Gas Parley Set For Honolulu

HONOLULU, Hawaii — Second biennial "Mid-Pacific Gas Merchandising Conference" will be held here Feb. 13-14, 1961, with headquarters at Hawaiian Village hotel.

Representation is expected from all parts of the mainland as well as from Canada, Australia, Japan, and the Philippines. Information may be obtained from Ted M. Wiget, manager of advertising, Honolulu Gas Co., Ltd., P.O. Box 3379, Honolulu 1.

Interchangeable Blowers Said To Simplify Addition of Cooling To Heating Systems



DAYTON — Increasing cfm capacity when cooling is added to warm air residential heating systems is said to be simplified with a new series of eight blower assemblies divided into four interchangeable combinations developed by The Lau Blower Co. here.

The combinations also provide furnace manufacturers with the opportunity to standardize on various parts as blower mounting rails and furnace bulkheads or separation sheets for an entire line of home heating equipment, it was stated.

* * *

Company officials said the development "is a major step in the simplification of residential air moving equipment.

"Where required, the new interchangeable blowers make it possible to select a blower with the same cfm delivery and lower outlet velocities," the company said.

"For instance, a system may require a 9-in. diameter blower for heating only. When cooling is added a 10-in. blower can be installed within the same mounting dimensions.

"The idea applies to lower outlet velocities for the same cfm delivery. Field installers have only to remove the smaller blower and mount the larger one. The reverse can also be accomplished."

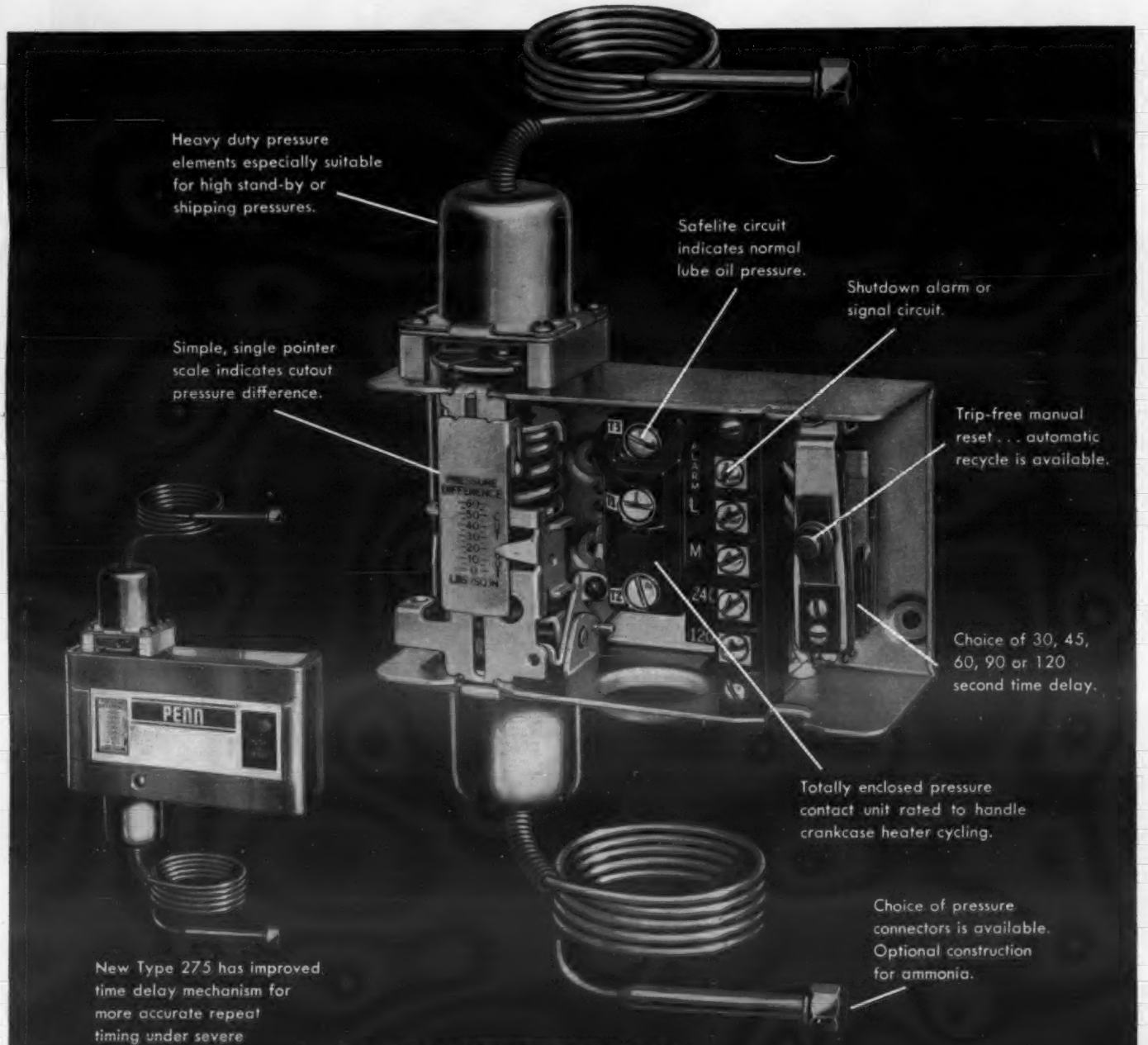
The new blowers are now available in the following combinations: 9 and 10-in. diameters and 10 and 12-in. diameters in both 6 and 9-in. widths.

Further information may be obtained from the Blower Div., The Lau Blower Co., 2027 Home Ave., Dayton 7, Ohio.

NOW

BETTER THAN EVER!

New Type 275 is the sure way to stop slow pickup or loss of lube oil pressure from crippling pressure-lubricated refrigeration compressors . . . get the complete story from your wholesaler!


Heavy duty pressure elements especially suitable for high stand-by or shipping pressures.
Safelite circuit indicates normal lube oil pressure.
Shutdown alarm or signal circuit.
Simple, single pointer scale indicates cutout pressure difference.
Trip-free manual reset . . . automatic recycle is available.
Choice of 30, 45, 60, 90 or 120 second time delay.
Totally enclosed pressure contact unit rated to handle crankcase heater cycling.
Choice of pressure connectors is available. Optional construction for ammonia.
New Type 275 has improved time delay mechanism for more accurate repeat timing under severe vibration conditions.
PENN

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

C. A. Olsen Elected Board Chairman of Johnson Furnace

CLEVELAND — C. A. Olsen, one of the leaders of the warm air heating and air conditioning industry for nearly 40 years, has been elected chairman of the board of The Johnson Furnace Co., the firm announced.

C. A. Olsen

Johnson Furnace, 2128 W. 117th St., was organized in 1958 and manufactures residential heating and air conditioning equipment under the trade name "Air-Ease."

A native of Chicago, Olsen is past president of the National Warm Air Heating & Air Conditioning Association, and a former director of the National Association of Manufacturers, York Corp., and several other corporations, it was noted.

Bert F. Baker Dies

OKLAHOMA CITY—Bert F. Baker, 63, veteran refrigeration and air conditioning contractor, died Oct. 20 in St. Anthony hospital.

A. O. Dietrich

D. B. Randall

Honeywell Promotes 3 to Advertising, Sales Promotion Posts

MINNEAPOLIS — Three advertising and sales promotion officials of Minneapolis-Honeywell Regulator Co. have been promoted to new positions, H. D. Bissell, vice president, announced.

Arthur O. Dietrich, since 1955 sales promotion manager for all of the company's Minneapolis-based divisions except military, has been appointed manager of advertising and sales promotion for Honeywell's industrial operations, with headquarters in Philadelphia.

Dean B. Randall, director of advertising for the company's Minneapolis-based divisions, has been named director of advertising and sales promotion. His enlarged responsibilities will include all sales promotional activities formerly handled by Dietrich.

At Philadelphia, Dietrich will succeed Charles W. Bowden who has been promoted to the position of industrial sales manager for Honeywell's International Div.

Henry G. McCullough Dies of Heart Attack

PHILADELPHIA — Henry G. McCullough, 60, president of S. S. Fretz, Jr., Inc., prominent Philadelphia air conditioning and appliance distributor, died Oct. 30 of a heart attack at his home in Bala-Cynwyd, Pa.

He joined Fretz in 1932 as the firm's first employe. He worked in various departments until 1941 at which time he was elected vice president. In 1953, he became executive vice president and in 1958 was elected president and board chairman.

Arthur Cecil Roe Dies Following Heart Attack

ST. LOUIS — Arthur Cecil Roe, 69, staff engineer of the National Industrial Service Association, Inc., and widely-known author of textbooks and magazine articles on the repair of electric motors, died at St. Luke's hospital Oct. 28 after suffering a heart attack at his desk on Oct. 10.

ROE had joined NISA in September, 1958, after retiring from the Westinghouse Electric Corp. where he had been employed for 46 years as a shop superintendent and as a consulting and design engineer in New York City, Detroit, and Pittsburgh.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Kramer Trenton 'Thaw System' Features Low First Cost

TRENTON, N. J. — Kramer Trenton Co. has developed and introduced the "Thaw System," a companion to the "Thermobank."

It is a new automatic, hot gas defrost system for application where the primary factor is low first cost, according to the firm.

"The heart of the Thaw System is the metering accumulator designed to collect the liquid refrigerant during defrost and to slowly meter it into the suction line in small, tolerable amounts which can be completely re-evaporated," it was explained.

"The extra large liquid storage capacity of the Thaw System metering accumulator adds compressor protection. The system has an easily removable strainer and metering tube, facilitating easy servicing should it be required. The gravity oil drain stops oil trapping in the accumulator and oil robbing of the compressor lubricating system. Control of liquid is positive by the use of a calibrated metering tube during defrost.

"The Thaw System holdback valve prevents compressor overloading during initial pulldown, defrost, and at the start of the refrigeration cycle. Low temperature compressor can be used with standard electrical protection and it is not necessary to oversize the protection.

"The Thaw System produces more heat quickly for defrosting by maintaining a greater compression ratio and keeping the condensing temperature in the defrosting coils at a higher level.

"Kramer's patented 'Ice-Coat Control' eliminates unnecessary defrost cycles and prevents a defrost cycle from starting when the compressor is off. Frost on the product and box warm up is prevented by the post defrost period which keeps the evaporator fans off until the coil pressure is pulled down.

"The evaporator has an all copper drain pan with copper heating coil which is soldered to the drain pan and protected by the outer aluminum casing.

"The complete system includes metering accumulator, evaporator, heat exchanger, timer, hot gas solenoid valve, hold-back valve, hot gas strainer, and check valve."

Hupp Acquires Radiant Heating, Drying Firm

CLEVELAND — Hupp Corp. has enlarged its stake in infrared radiant heating by acquiring assets of Horace L. Smith, Jr., Inc., Richmond, Va., thermodynamics engineer specializing in radiant heating and drying.

John O. Ekblom, Hupp chairman, said the Smith organization perfected the Smitherm process for drying pulp and paper, finishing and color dyeing synthetic textiles and commercial processing of food products.

The transaction involves exchange of all common and preferred shares of Horace L. Smith Jr., Inc., for Hupp common shares and royalty payments on Smith patents over a period of years, Ekblom said.

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You plan better with Chase® Copper Tube!

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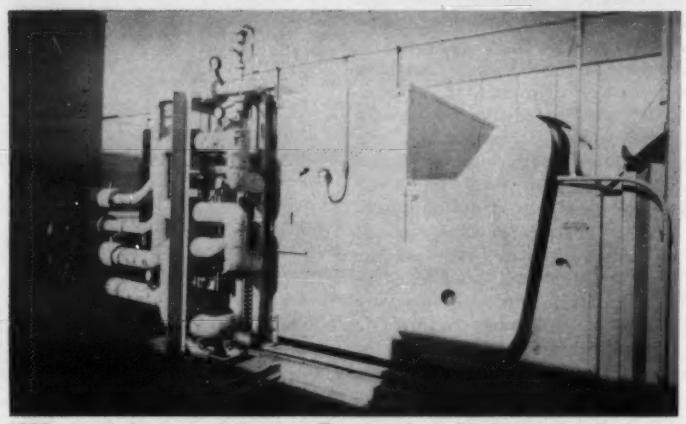

ATOP one of the seven structures at Thompson Ramo Wooldridge Inc. in Canoga Park, Calif. is a Recold #580 multi-zone unit which delivers reliable and quantitative air conditioning through a fan-coil system despite extremes of temperatures that regularly reach desert highs.

CANOGA PARK, Calif. — What is claimed to be the biggest comfort air conditioning system west of the Mississippi has passed its first big heat test at one of the nation's primary defense installations — the research and development facility of Thompson Ramo Wooldridge Inc. here.

By mid-summer, temperatures hit 115°F at the San Fernando Valley site of Thompson Ramo Wooldridge Inc.

But a massive system of 2,500 tons at present and 5,000 tons when fully developed, featuring a battery of Recold Corp. multi-zone units kept temperatures inside the vital 383,500-sq ft defense compound at a comfortably cool 74.

The Canoga Park facility is primarily engaged in research and development of complex electronic and aerospace systems. It is probing on such frontiers as electronic reconnaissance and countermeasures, microwave techniques, infrared systems, telemetry, nuclear devices, electronic language translations, and advanced radio and wireline communications.

One of the important TRW contributions to American space exploration, for example, was the successful launching in March of the "Paddlewheel" earth satellite.

TRW facilities gave the winged laboratory its systems engineering and technical direction, payload stage, digital telemetry system, and transmission system.

Because of the high-priority security operations at the seven building facility, reliable and quantitative air conditioning was a must. Built around the Recold fan-coil distribution system, a central plant was devised to furnish air conditioning on schedule and in volume to any part of the sprawling complex.

Guaranteed sources of power and centralized controls assured that the facility, despite extremes of temperature that regularly reach desert highs, would never lack refrigeration.

A spread of two 100 by 200-ft spray cooling ponds were used for heat rejection, instead of cooling towers. The combined capacity of both ponds is 330,000 gals. of water.

The spray pools dominate a mall at the upper level of the four-level terraced site. From each pool rise 120 1½-in. heads, bunched in 20 clusters of six heads each.

Condenser water system passes water through the heads to be sprayed in a mist into the air and cooled down to a range of 89-94°.

Water Piped Underground At 40°, Returns at 45°

Water is chilled to 40° by 12,400 lbs of refrigerant in two giant compressors. It is piped underground to the buildings, then returned at approximately 45° to be re-chilled after having done its work.

Air passes over the coils in parallel, rather than in series, and enters the double-duct system to be distributed under medium pressure at 2,400 fpm.

Anemostat diffusers at the point of distribution are 6, 8, and 10 in., varying from 200 cfm to 400 cfm.

The central heating and air conditioning units are housed in an 18,500-sq ft structure of tilt-up concrete. From this center, conditioned water flows to all units of the facility.

Each of the seven structures is serviced by six 35,000 cfm air handling units, putting total capacity at 1,470,000 cfm.

System Employs 10% Outside Air

Ten percent outside air is employed by the giant system, with the balance recirculated.

Engineers, while challenged by the high and extended heat problems of the area, had no humidity problems per se. So no attempt was made to control humidity.

However, controlled sound pressure levels are maintained throughout.

Bing Wong of Western Air & Refrigeration, responsible for the vast comfort air conditioning system, pointed out that the system is used in conjunction with Anemostat turbulators.

The A. C. Martin Architects and Engineers who designed the over-all job made allowance in construction of the central plant for addition of two compressors.

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4. Directed and even distribution of liquid gives filtration in depth—coupled with short flow path means low pressure drop—longer system life.
5. Rigidly controlled activation—factory sealed.
6. Maximum system protection against acids and other foreign matter.
7. Copper (ODS) fittings mean easy brazing.
8. Brass (SAE) fittings means no flare nut creep.
9. Full flow fittings mean low pressure drop.

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Individual Control Available with 540-Ton Year-Round Hydronic System In Orlando Bank

ORLANDO, Fla.—The First National Bank at Orlando, Fla., dedicated early this year and termed the showcase of Southern banking circles, is air conditioned year round with a 540-ton hydronic system that allows employes and tenants to select the temperature desired for personal comfort.

"This is an especially beneficial feature," according to the bank's chairman of the board, Linton E. Allen, "for in our climate when building occupants on the sunny side require full advantage of the air conditioning system, the comfort level of people working on the shaded, cooler side also must be considered. The flexibility of individual temperature controls in each room and window unit location is a definite advantage."

Orlando's newest addition to the banking fraternity occupies almost a full block and contains 160,000 sq ft of floor space in 12 stories. Banking facilities occupy the four lower floors. Tenants occupy the remaining space.

Windows are omitted from the south and north sides of the brick and marble structure. East and west elevations contain about 700 windows with glare-reducing glass and aluminized drapes.

Doing the job of year-around air conditioning for the bank are two Carrier 19C4F-8-8 hermetic water chillers. Water out temperature is 45°F. Refrigerant 113 is employed in the system.

Two cooling towers of the Marley two-cell induced draft type are installed on the roof. Temperature of water leaving the towers is 85°.

Other Carrier equipment includes 423 under window units necessary to the periphery system, heat diffusers, high-pressure air apparatus, and a dehumidifier.

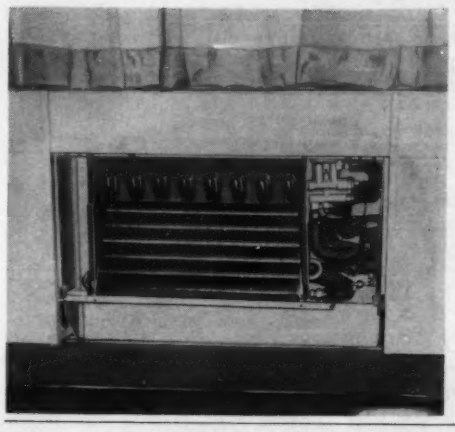
Individual temperature control at each under window unit is accomplished by a VD-213 "Selectaflow" control manufactured by the Detroit Controls Div. of American Radiator & Standard Sanitary Corp. A single thermostatic bulb and adjustment knob at each under window unit control the area.

The Selectaflow is a self-contained thermostatic selector valve designed for specific application to year-around air conditioning systems using hot or cold water as the heat transfer medium. It requires only single supply and return lines.

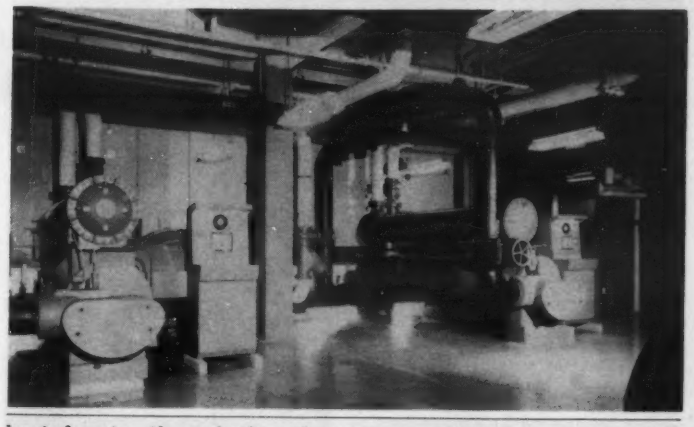
The Selectaflow contains a passage for hot water operation and another for cold, each with its own ball-type control valve, and a water inlet change-over valve which responds to change-over temperatures by shunting the flow into one passage or the other.

Movement of the change-over valve for summer or winter operation is produced by a "Vernatherm" element, a Detroit Controls positive-action thermo actuator. The Vernatherm is housed in a continuously flowing water by-pass.

Actual room temperature is controlled by an oil-charged element built into the upper mechanism of the Selectaflow. This element operates in response to a thermostatic bulb exposed to room temperature, exerting a fulcrum-and-lever action on the control valves in both passages to close off one permanently during the summer or winter cycle while metering the varying requirements of chilled or heated water through the other meter.



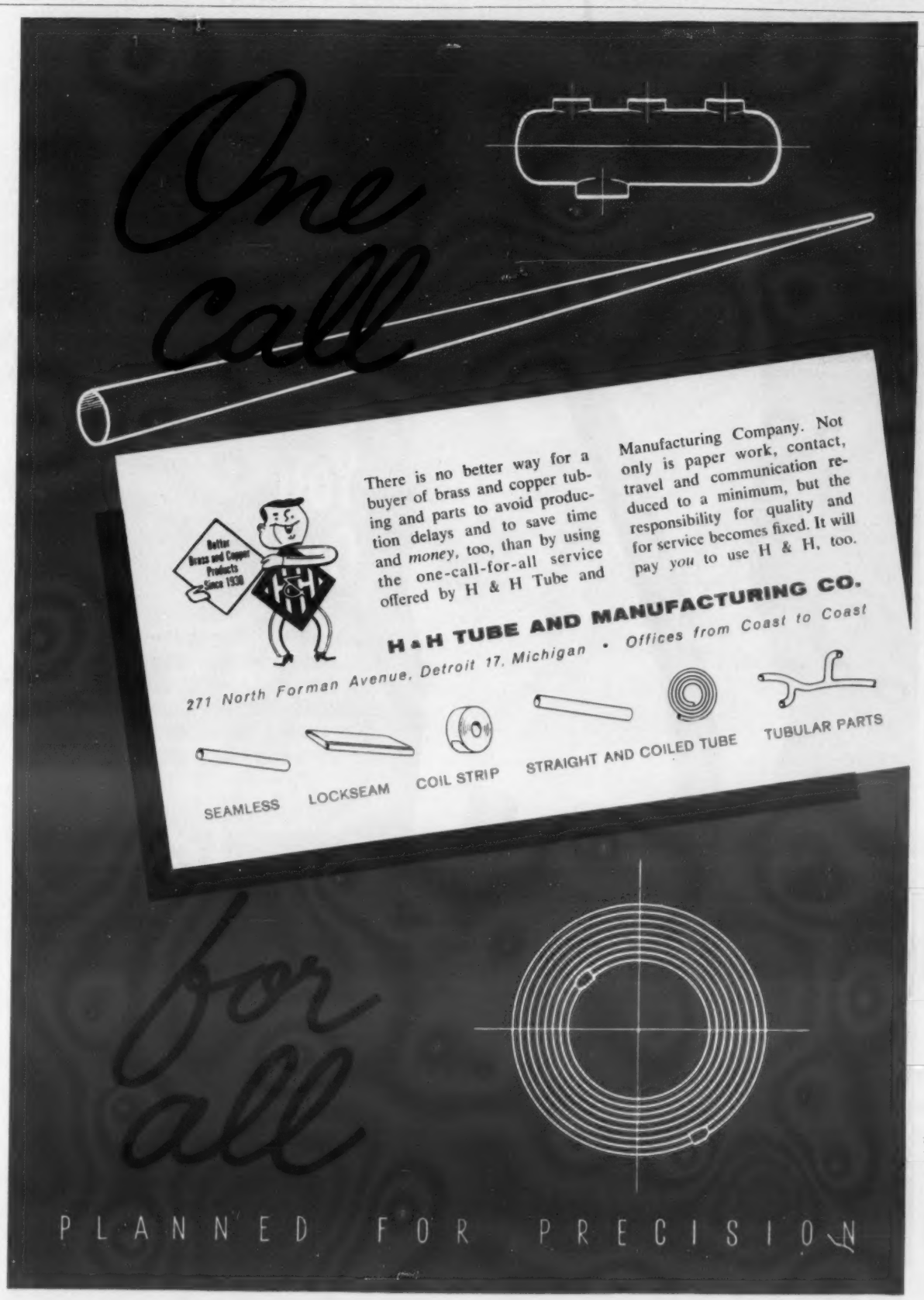
LEFT: Typical under window unit installation. "Selectaflow" control is shown at right of picture.



RIGHT: Two Carrier 19C4f-8-8 hermetic water chiller units installed in machinery room of First National Bank of Orlando, Fla.

In an area like Orlando, where cooling is the basic need, the occasional change-over to heating during cooler days can be accomplished easily by the engineer in charge merely changing a switch which, through the control system, automatically changes from cold water to hot water operation.

Architect on the First National Bank was Kemp, Bunch & Jackson of Jacksonville. Consulting engineer was VanWagenen, Taylor & VanWagenen, also of Jacksonville. General contractor was Sipple, Thompson & Street of Orlando, and mechanical contractor was Wrenn Brothers, Rock Hill, S. C.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Reducing Welding Costs

at

Friedrich Refrigerators

A new Linde Purox hand welding blowpipe with dual head reduces Friedrich Refrigerators, Inc. welding costs for brazing tubing in the refrigerating coils. This double tipped nozzle developed especially for Friedrich by Linde reduces welding costs on the more than 40,000 welds which they make per day. This dual headed welder intensifies the heat and allows the coil to be welded more quickly. Savings in fuel are great, with acytelene costing 20 cents per cu ft, whereas the natural gas used in this new double tipped nozzle costs a fraction of a cent per cu ft. Friedrich is the only plant in the country with this double headed welding blowpipe, and 40 are now in use, it was noted in the announcement.

4-Year Product Cost Evaluation Program Cuts Costs, Improves Product Quality at American Standard Air Conditioning Plant

DETROIT—How a four-year product cost evaluation program at its Elyria plant has enabled the Air Conditioning Div. of American-Standard substantially to reduce costs and simultaneously step-up product quality and performance standards on its line of gas-fired warm air furnaces for home use was the theme of a special program presented here by three key divisional management executives.

The occasion was the second annual joint dinner meeting of the management clubs of the corporation's Detroit Controls Div., Detroit, and its Industrial Div. in Dearborn.

Some 315 members of the two organizations attended. Also present were guests from Cincinnati, Chicago, and New York as well as Melbourne, Australia, and London, England.

Addressing the group on the management, manufacturing, and engineering aspects of product cost evaluation as a tool for cost reduction and efficiency improvement on a coordinated basis were Clyde H. Wilkinson, president of the Air Conditioning Div.; Wilbur G. Senft, vice president-manufacturing; and Robert Wilson, manager of product engineering and development.

Senft and Wilson are headquarted in Elyria, where they are also active in many community activities.

Wilkinson, from the corporation's general offices in New York City, defined product cost evaluation as "the technique of determining whether a manufacturer's product is competitive in quality, performance, acceptability, cost, and price."

Started in 1956 and still in force, the program developed at the Elyria plant has contributed importantly to increased divisional sales volume, thereby providing a broader base for continuing growth and further diversification, he said.

"Product cost evaluation," the American-Standard executive declared, "is a team job that requires the enthusiastic effort of everyone in an organization. It is based on a premise as simple as ABC—Always Be Competitive."

Senft outlined the action program taken at the division's Elyria plant to achieve the cost economies and quality improvements desired.

"In our case," he said, "the program provides an economic way of life that is becoming increasingly necessary throughout American industry today due to mounting competitive pressures and other factors."

As proof of the program's effectiveness, Wilson in his talk cited access door panels, heat exchangers, blowers, and 15 other warm air furnace parts which the American-Standard Air Conditioning Div. now makes better and at lower cost as a result of simplified design, improved engineering, and more efficient production.

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Olin Mathieson Adapts Welding Process for Use on Aluminum Items

NEW YORK CITY — Olin Mathieson Chemical Corp. announced it had successfully adapted a fast, economical welding process to the manufacture of aluminum products.

In suitable applications, according to the company's Metals Div., the process will result in more rapid production, substantial labor and equipment savings, and improved product appearance as compared with those attainable with riveting or conventional resistance spot welding.

The technical procedures and test data will be made available to interested manufacturers. The company said it already had received several invitations to conduct in-plant demonstrations showing how the process might be applied to meet specific requirements.

White-Rodgers Names William L. Mayo

ST. LOUIS—Appointment of William L. Mayo as product manager was announced by White-Rodgers Co.

Mayo will operate within the executive sales group, handling special assignments, it was stated. He had most recently been associated with Thermac Co., following a number of years with Perfex Corp.

Shreveport Permits Total 107 In Oct.

SHREVEPORT, La.—During October, the city's Air Conditioning Dept. issued 107 permits representing a total equipment and installation cost of $224,185, according to Clyde Juneau, air conditioning inspector. The permits cover air conditioning, heating, and refrigeration.

The October total compares with 119 permits issued in September for installations costing a total of $192,178. October permits were broken down as follows:

Residential: year-round air conditioning and heating—17; air conditioning—2; heating—61; replacements—2.

Commercial: year-round air conditioning and heating—7; air conditioning—3; heating—2; replacements—2.

Alterations and/or additions—4. Refrigeration—7.

The largest commercial permit of the month, amounting to $54,608, was issued to Robertson Plumbing Co. to install air conditioning, heating, and refrigeration for Brookshire Food Store, 4019 Fern.

The largest residential permit was issued to Arkansas-Louisiana Gas Co. for a $4,770 air conditioning and heating installation for Shreveport Long Leaf Lumber Co.

6 Engineering Groups To Sponsor Sessions At Power Conference

CHICAGO—Six national engineering societies have agreed to sponsor special sessions on power and fuels at the 23rd annual American Power Conference to be held here March 21-23 at the Sherman hotel.

They are the American Society of Heating, Refrigerating & Air-Conditioning Engineers, American Society of Mechanical Engineers, Western Society of Engineers, National Association of Power Engineers, American Institute of Electrical Engineers, and American Society of Civil Engineers.

Conference Director R. A. Budenholzer of Illinois Institute of Technology announced that the conference also will include sessions on the operation of supercritical central station power plants, and new developments in the field of nuclear power generation.

The conference is sponsored by Illinois Tech, nine cooperating universities, five regional universities, and nine cooperating societies.

Thomas Chester Dies After Long Illness

BIRMINGHAM, Mich. — Thomas Chester, 79, a retired heating and air conditioning engineer, died recently in William Beaumont hospital after a long illness.

A native of England and a former chief engineer for American Blower, he worked during World War II for both the U.S. and British governments and was engaged to air condition British salt mines for ammunition storage.

ASHRAE Chapter Hears Aitkenhead

FRESNO, Calif. — The development of electronic air cleaners and their application was the subject of R. C. Aitkenhead, vice president of Electro-Air Cleaner Co., Inc., McKees Rocks, Pa., at the October meeting of San Joaquin Chapter of the American Society of Heating, Refrigerating & Air-Conditioning Engineers.

Except for December, monthly meetings of the chapter are scheduled for the third Tuesday. Christmas dinner-dance will be held Dec. 12.

Officers for 1960-61 include President Roy Cody, Vice President Dave Rodkin, Secretary Bill Grotzke, Treasurer George Yamaguchi, and board of governors: George McMahan, John Lamborn, Roy Cody, and Dave Rodkin.

250 Journeymen Enroll In Certification Training Program In So. California

LOS ANGELES—An all-time high of 250 journeymen have enrolled in the certification training program conducted by the refrigeration and air conditioning industry of Southern California, according to Harry Bowe, training coordinator for the program.

Of that number, 37 are taking instruction necessary for their initial certification. The remaining are enrolled in courses leading to recertification as qualified mechanics in the air conditioning and refrigeration industry.

Purpose of the journeymen training program, sponsored jointly by labor and management representatives of the refrigeration and air conditioning industry of Los Angeles and Orange counties, is to provide skilled manpower for the installation and servicing of refrigeration and air conditioning.

Up-to-date techniques and new developments in refrigeration and air conditioning equipment are also included in the program to assist the journeymen, it was pointed out.

Refrigeration and air conditioning fundamentals is the course being taken by journeymen who are certifying for the first time. Those men completing courses for recertification are enrolled in such courses as customer relations, piping and control systems, air balance, or welding oxy-acetylene.

Under the certification program, courses are taught at night in convenient, nearby school classrooms in order that journeymen can attend after working hours. Instructors are qualified men selected from key positions in the industry who are noted for their technical and educated backgrounds.

The journeymen are all members of Refrigeration Fitters, Branch Local 250, UA.

Limbach Names Mansfield

PITTSBURGH — F. Allen Mansfield has been appointed manager of a new Boston branch of the Limbach Co., one of the nation's largest mechanical contracting organizations.

For the past seven years, Mansfield has been associated with major New England heating and air conditioning firms in sales capacities.

Mansfield announced construction work has already begun on Limbach's $3½ million of Boston contracts.

TENNEY COOLING NEWS, HUMBOLDT, MAY 30, 1960

BIG NEWS FROM TENNEY

THE HUSTLER IS HERE!

Powerful new line of refrigeration units for reach-ins, under-counter boxes, salad cases, beer coolers, wall dairy and beverage coolers, pastry boxes, and all comparable refrigeration installations.

Union, N. J. — Tenney's new line of Hustler unit coolers are here. Lightweight, rustproof — sleek, sturdy, silent. They can be quickly and easily installed, in all locations, with the slotted, adjustable hangers mounted on the unit. And the price is right.

Outstanding features

The Hustler features controlled directional air flow, quiet and efficient fan motor arrangements. Connections located for use on either end with knockouts. Drain fitting mounted for copper tube or hose.

Looks match performance

Dressed in a handsome, all-aluminum patterned casing, the Hustler's rugged appearance matches its performance. Construction conforms to Tenney quality standards.

Available to all

The Hustler is available to O.E.M.'s, and also to servicemen and contractors through refrigeration wholesalers. Write for Bulletin 119-59

Check these specs!

Model	CAPACITY B.T.U./HOUR 10° T.D.	15° T.D.
H-13	1360	2040
H-17	1750	2625
H-23	2380	3570
H-30	3020	4530

Model	CIRCULATION C.F.M.	FAN DIA.	Mtr. Watts
H-13	205	8"	46
H-17	280	8"	50
H-23	320	8"	50
H-30	400	(2)8"	90

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Upgrading Heating for Tract Homes

How Contractor Does It and Sells It to Purchaser

PERMANENT display building at tract site was supplied by the builder for display of featured items in the homes. Heating contractor's display is in center of picture.

LOS ANGELES — How do you "upgrade" heating systems for tract homes, and then sell that "upgrading" to prospective purchasers of such homes.

Grand Heating & Air Conditioning Co., Lennox dealer here, has found a key to this upgrading, but it took some well planned and executed promotion and display effort.

What the dealer found to be necessary, once the situation confronted him, was something beyond the usual "model home installation" in which the prospective purchasers supposedly become aware of the benefits of some "upgraded" feature of the tract home provided by a progressive builder.

CLOSEUP of contractor's exhibit of Lennox perimeter heating system which was designed to sell the prospective purchaser on the value of the perimeter system. Stepping on floor mat at base of exhibit sets off a recorder that presents three messages from satisfied homeowners.

The progressive builder was found in the person of Barney Morris of Grandview Construction Co., Beverly Hills, Calif. Morris is thoroughly sold on building quality into his homes, and once he had been sold on the worth of a perimeter heating system, he specified it for the new homes that he would build henceforth. He did, however, believe that some ingenuity would be needed in getting the "extra value" of such a system to prospective home buyers.

Morris provided a "head start" for any such promotion in the form of a permanent display building at the tract site. In this building are displays of all the featured items such as appliance and plumbing fixtures, and things such as color selection charts.

Thus, it was up to Grand Heating & Air Conditioning Co. to devise a display that would put across the value of the perimeter system to the prospective home purchaser. Working with Lennox representatives, they feel that this has been accomplished, with a display which occupies a center (most of the others are along the wall) spot in the display area.

The base of the display consists of a floor plan of one of the Grandview homes, with the warm air supply system shown on the plan with moving "red wavy" lines out to the perimeter of the house, illustrating the flow of heat to the cold outside walls.

A floor mat, flush to the display, when stepped upon sets off a recorder which presents three messages from satisfied Grandview homeowners; as they talk on the benefits of perimeter heating, their picture lights up on the display.

Literature is also made available on the display stand so the prospect can take with him to read at his leisure the full story on the Grandview perimeter heated homes.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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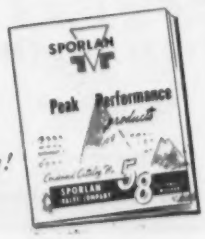
offer You a perfect combination engineered to fit any size installation... right down the line!

Ask your friendly Sporlan Wholesaler for your copy of Condensed Catalog 58 today!



SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MISSOURI
EXPORT DEPT: 85 BROAD ST., NEW YORK 4, N. Y.

MIGHTY MITE
Makes Motor DRIVEN APPLIANCES SAFE!
MIGHTY MITE MOTOR PROTECTORS
MECHANICAL INDUSTRIES PRODUCTION CO.
223 Ash Street Akron, Ohio

BDSA Lists Sales Opportunities for Air Conditioning, Refrigeration Abroad

WASHINGTON, D. C. — A number of new opportunities to sell air conditioning and refrigeration equipment abroad were reported recently by the Business & Defense Services Administration of the U. S. Dept. of Commerce.

International Fisheries (Pakistan) Ltd. of Karachi, **Pakistan** is asking for bids on refrigeration and processing equipment for a plant capable of handling 40,000 lbs of fish and shrimp per day. Bids are invited until Nov. 25.

The company wants a complete plant (2 plate freezers), complete plant and equipment for three low temperature cold rooms, complete plant and equipment for two chilling rooms, an ice plant, plant and equipment for ice storage, eight insulated doors, and 960 cu ft of insulating materials.

More information can be obtained from the Trade Opportunity Section, Trade Development Div. of Foreign Commerce in the U. S. Dept. of Commerce.

Bids are being invited until Jan. 13 on cooling towers for the Chandrapura thermal power station, Damador Valley Corp., by the **India** Supply Mission, 2536 Massachusetts Ave., N.W., Washington 25, D. C. Tender No. SE-279 documents may be obtained from the Mission at $3 per set.

Kuwait Firm Seeks Cooling Equipment Lines

Al Omar Mechanical Engineering Co., importing and construction firm in **Kuwait,** is seeking a complete line of air conditioning equipment suitable for local power supplies, i.e., 3,300 volts, 400/440 volts, 3 phase, 50 cycle, and 240/250 volts, 1 phase, 50 cycle.

The firm wants centrifugal type compressor plants and remote condensing units ranging from 50/75 to 750/1,500 hp, packaged units and heat pumps ranging from 3 to 50 hp, and other main components such as air handling units, cooling towers, etc.

Address is P.O. Box 392, Kuwait, Kuwait.

Also from Kuwait, Kuwait Engineering Works, Ltd. is seeking air conditioners of unspecified sizes operating on 230 volts 50 cycles. Address of this importing firm is P.O. Box 464, Kuwait, Kuwait.

Iran Municipality Seeks Bids on 5,000-Ton Cold Storage Plant

From **Iran,** the municipality of Shiraz invites bids for the design, supply, and erection of a complete 5,000-ton cold storage plant with facilities to process 40,000 sheep and 2,400 cattle.

A copy of the bid notice is available from the Trade Development Div., U. S. Dept. of Commerce. Proposals should reach the municipality of Shiraz about Dec. 15, accompanied by a preliminary deposit amounting to 5% of the total contract.

Orient Enterprises, Inc. of Tehran, Iran is seeking domestic refrigerators operating on 220 volts, 50 cycles. The manufacturer's agent's address is 103 Ferdowsi Ave., Tehran.

From **Greece,** unspecified refrigeration equipment valued at about $300,000 is being sought by the Retirement and Welfare Fund, Personnel of the Agricultural Cooperative Organizations. Bid documents are available from this authority on payment of $3.30 per set. Bids are invited until Dec. 5. Its address is 48 Mendandrou St., Athens, Greece.

More information may be obtained from the Trade Opportunity Section mentioned above.

From **Japan,** the New Asia Trading Co., Ltd., an import-export firm, is seeking window-type air conditioners. Its address is 4th Floor, Onimahobin Bldg., No. 6, 1-Chome, Utsubo-minami-Dori, Nishiku, Osaka, Japan.

L. Hartmann & Co. of 42 Neue Mainzer Strasse, Frankfurt, **Germany,** wants air conditioning systems of various types and sizes.

Evan Wong & Son Ltd., 3 High St., Georgetown, **British Guiana,** an importer and distributor, wants to obtain a distributorship or agency for air conditioners, both small room type units and large commercial plants of medium to high quality operating on 110 or 220 volts, 50 cycle.

The firm is reported to handle several types of refrigeration equipment now and to have a reasonably good service department with trained mechanics.

Electron NV of Paramaribo, **Surinam** would like to contact companies producing ½-hp room air conditioners for 115 volts, 50/60 cycles, 7½ amps. The firm said that if none are now being manufactured, it would consider direct purchase of reconditioned units.

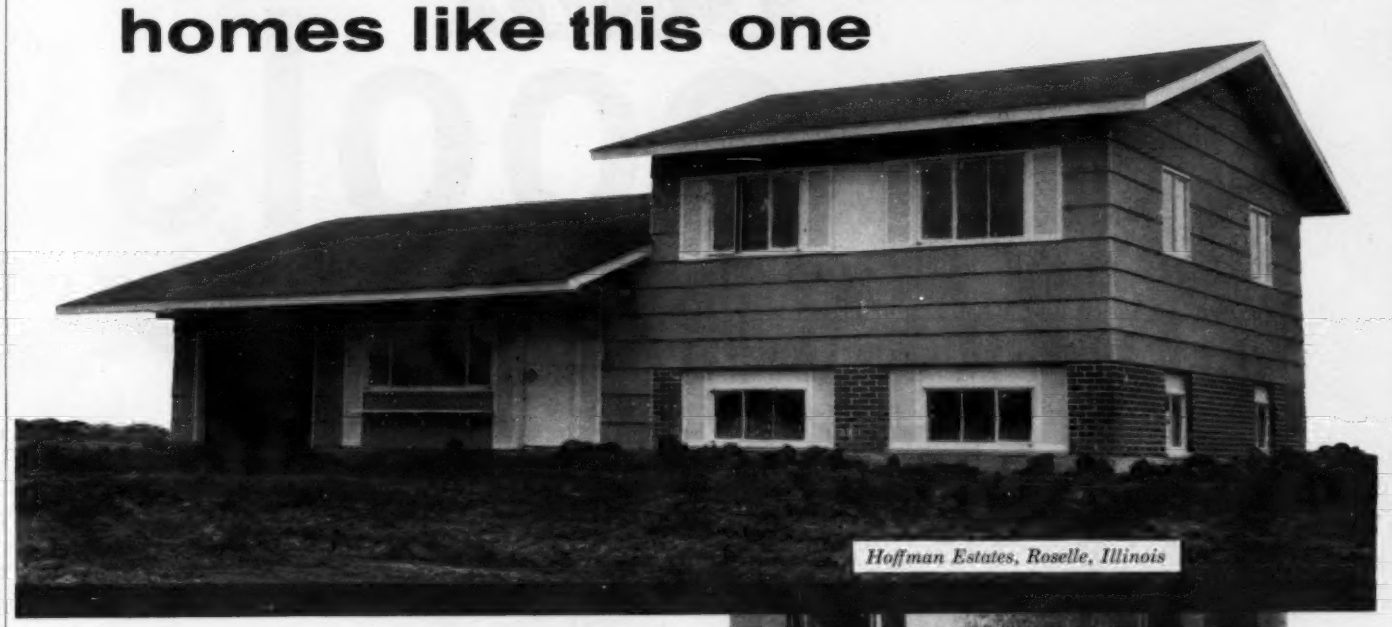
The company's address is Grote Hofstraat 7 (P. O. Box 155), Paramaribo, Surinam.

The Bureau of Foreign Commerce reports that the government of the United Arab Republic has under consideration construction of 17 cold storage plants by the end of 1961.

Three will be built in Egypt and 14 in Syria. Estimated cost is 1,100,000 Egyptian pounds ($3,168,000—official rate).

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Quiet Century motors move warm air through thousands of homes like this one



Hoffman Estates, Roselle, Illinois

One reason for the wide acceptance of Century fhp motors for furnace blowers is their unusually quiet operation. Their cushion bases, sleeve bearings, and dynamically balanced rotors virtually eliminate hum, rumble, and vibration. This means that you can install a Century equipped furnace in today's compact homes, in basements or adjacent to living areas.

Century motors are dependable, too. You spend less time making nuisance service calls because Century furnace blower motors are specifically designed for warm air furnace operation. Heavy "Mylar" slot insulation and high temperature insulating varnish significantly add to electrical strength. PERMAWICK lubrication of the sleeve bearing further assures trouble-free operation by maintaining a perfect oil film on the journal surfaces.

Century motors are available in 48-frame and 56-frame (where one-half horsepower capacity and larger is required) designs, as well as in two-speed models for combination heating and cooling service. For specifications and ordering information, contact your nearest Century Electric Sales Office or Authorized Distributor.

CENTURY ELECTRIC COMPANY

St. Louis 3, Missouri *Offices and Stock Points in Principal Cities*

Century

60-14

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

putated below the knee. Nevertheless he became Oakland's first-string quarterback — good passer, great defenser—operating swiftly on an artificial leg.

Coach Woody Hayes of Ohio State is a foremost proponent of "ball control" (don't pass, slowly grind out yardage on the ground, reluctantly give up the ball on fourth down).

Hayes says he got the idea from John Dietrich of the *Cleveland Plain-Dealer*. Upon learning this, Dietrich was cornered by Lyall Smith of the *Detroit Free Press,* and asked for a further explanation of the theory which worked so well for the Buckeye coach. (Two Big Ten championships and Rose Bowl assignments in three years.)

"I cover all Ohio State games down at Columbus," confessed Dietrich. "If few passes are thrown, it speeds up the game so much that I have plenty of time to write my story, catch the early train back to Cleveland, and have dinner at home."

An attendance record may have been set in Detroit on October 28, 1957.

John Carroll university freshman licked the Wayne State freshman, 19 to 0, before eight spectators.

In a Family Way

Nonchalant Frankie Albert, while T-quarterbacking for Stanford, pulled a last-10-seconds victory out of the fire with a

(Continued on next page)

ARW MEMBERS and their wives combined educational seminars and business meetings with a five-day cruise to Jamaica and Haiti recently. "Candid Corner" presents here some of the sights they saw. Above: Haitian voodoo dancers.

THE AIR CONDITIONING and Refrigeration Wholesalers convention was held aboard the *S.S. Hanseatic,* shown at left anchored in Montego Bay, Jamaica. Below: Seems like everybody is selling something here. Interesting native types hawk bananas, seashells, baskets, and assorted junk.

Candid Corner

Curtis

COOLS

with

Packaged Air Cooled Conditioning Units 3 thru 10 Tons

Packaged Air Conditioning Units 3 thru 60 Tons

Packaged Liquid Chillers 7½ thru 125 Tons

Matching Evaporative Condensers, Cooling Towers and Air Handling Units

Condensing Units 3 thru 100 Tons

And in all applications—Curtis units perform dependably, always up to and frequently surpassing rated capacity. Key thing to remember is this...Curtis manufactures a complete line of units ideally suited to any application your customers are bidding on. You can depend on Curtis for high quality equipment with dependable performance. And a steady national advertising campaign developed around well known prestige installations helps pre-sell your customers. Your profit on Curtis is substantial, and your customers like the minimum service needed.

THE COMPLETE LINE OF LIQUID CHILLERS • PACKAGED AIR CONDITIONERS • CONDENSING UNITS

Curtis *Established 1854*

MANUFACTURING COMPANY • REFRIGERATION DIVISION • *Dept. 1, St. Louis 33, Missouri*

Inside Dope

By GEORGE F. TAUBENECK

(Continued from preceding page)

47-yard pass to Hugh Gallarneau.

Pretty cheerleader ran out and kissed him soundly.

"Honey," Albert recovered his breath, "if you'll hang another one like that on me, I'll run through that play once more for an encore."

Indiana U. Coach Phil Dickens was suspended one year for overzealous recruiting activities. He went home feeling disgraced. At his house it was worse.

His wife was crying, his daughter was crying. Phil went up to loyal son Billy's room, only to find Billy face down on his bed.

"Look, son," sighed Phil, "we gotta buck up."

"I can't help it, dad," Billy sobbed. "My dog was run over by a truck this morning."

Born a millionaire, competent quarterback Walter Fondren attended Texas U on an athletic scholarship.

"Everybody, but everybody," explained a university official, "is equal in Texas."

Audience Reaction

That controversial 1958 change in the rules—allowing two points for a conversion by pass or run—elicited this delightful comment from Art Guepe, coach at Vanderbilt:

"When-and-if we score a touchdown, I might just stand up on our bench and signal to the stands that we will attempt to pass the ball for the two points," Guepe said. "I'll gauge their applause—or their boos.

"Then I'll signal a possible run, and after that, signal a kick. Whichever suggestion finds the most favor, that's what I'll do. Then there should be no second-guessing in our democratic country where the vocal minority often rules."

Two Greek immigrants were watching their first football game. Said one to the other:

"This is all American to me."

"Johnson lacks the speed the Wolverine coach would like at the pot."—*Detroit Free Press.*

Facts of Life

Only one minute left in a big grid battle: Score: 7 to 6. Coach of the leading team sent in a new quarterback with instructions:

"Whatever you do, DON'T PASS!" he exclaimed. "Stay on the ground!"

On the next play, the quarterback handed off to his fullback who broke through and wasn't stopped until he hit the opposing team's eight-yard line. With seconds to go the quarterback, unable to resist the temptation to try for another touchdown, called for a pass.

A fast defensive back on the rival team speared the ball and, with a clear field ahead, legged it for the goal line. From out of nowhere appeared the passer.

With a desperation tackle, he nailed the runner from behind. Game ends.

As the players filed off the field the losing coach sadly remarked to the winning mentor: "It beats me how your substitute quarterback caught up with my fastest man."

Cracked the victorious coach: "Your boy was running for a touchdown. Mine was running for his life!"

Legendary Dad Butler, who trained University of Detroit athletic teams for what seemed like a century, walked into the offices of football coach Gus Dorais.

"What're you doing?" asked Dad.

"Filling out my income tax," answered Gus.

"What's that?" asked Dad.

Gus realized that Dad wasn't jesting.

"I explained that I was reporting how much money I made (to the government) and trying to figure out how much I owed them," he answered.

"The heck you say," countered Butler. "What business is it of theirs?"

Football Improvements

Minneapolis Tribune columnist Ed Goodpaster has applied for patents on the following football equipment for stadium spectators:

(1) *Head Points* — several nails driven into small oval board. Board is placed, points up, on head under hat. Then, when excited fans behind you thump you on the skull. . . . Ouch!

(2) *Look-Ma Sweaters*—built along strait-jacket lines, the sweater holds wearer's arms across chest, giving him a no-arms appearance. When a vendor sticks out a hot dog or change with the request, "Pass this down, please," you merely shrug your shoulders at him.

(3) *Endless Blankets*—would insure that the ankles of party at right end of a group will not be cold because party on left end is sitting on two folds of blanket.

And we might add these needed inventions:

(4) Bottomless, unbreakable bottles of cheer.

(5) Waterproof cigarettes and matches.

(6) Leisurely, unfrantic homeward traffic.

(7) GAW (guaranteed annual win) for the home team.

"What's Yominick's problem?" asked the head coach. "He isn't married, his grades are OK, we're taking care of all his expenses . . . yet there's something bothering him."

"It's his father," the line coach explained. "The old boy keeps writing his son for money."

LOOKING?
FOR REFRIGERANT HANDLING & MEASURING EQUIPMENT . . .

• Charging Stations • Charging Boards • Portable Refrigerant Measuring Tubes • Charging Hoses and Valves • Oil and Methanol Measuring Tubes • Quick Couplers • Tank Stands • High Vacuum Pumps • Manometers • Vacuum Gauges

SEE YOUR WHOLESALER OR WRITE US.

AIRSERCO MFG. COMPANY
435 Melwood Ave. • Pgh. 13, Pa.

How can you measure the quality of refrigerants?

A measure of refrigerant quality is how well it performs during the life of the equipment. When performance and life are considered, the field is narrowed to but one choice — Du Pont "Freon".

In actual performance "Freon", the original fluorocarbon refrigerant, has established an outstanding record through its use in millions of air conditioning and refrigeration systems — a proven record of quality performance that has never been equalled.

In actual time "Freon" has been proven by 30 years of increasing use in all types of air conditioning and refrigeration equipment. All the accumulated know-how, experience, research and production facilities behind "Freon" add up to a record in which "Freon" refrigerants have withstood the test of time—one which no other refrigerant can equal.

In addition, a continuing program of research and technical and marketing assistance is working to help improve today's products and to expand the future market for these products.

Any way you measure, it pays to use Du Pont "Freon". Specify it as the refrigerant in your equipment. It will never let you or your equipment down.

FREON®
premium quality
REFRIGERANTS

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

They'll Do It Every Time

by Jimmy Hatlo

THAT EXTRA ROOM ON DIMBULB'S HOUSE····HE HIRED A CARPENTER FOR HALF A DAY TO FRAME OUT THE JOB
OKAY, OLLIE···I JUST WANTED YOU TO PUT UP THE STUDDING···THAT'S THE HARD PART, TO GET STARTED···I'LL FINISH IT, MYSELF···
THANX AND A TIP OF THE HATLO HAT TO CONRAD HILBERT, WASHINGTON, NEW JERSEY
SO WHEN IT TURNS OUT JUST LIKE THE HOMEMADE LEANTO IT IS, WHO DOES HE GIVE CREDIT TO ?
WHO DID YOU SAY BUILT IT?
A GUY NAMED PLUMBOB··· HE TOLD ME HE WAS A CARPENTER··· I TOOK HIM AT HIS WORD···
O. PLUMBOB CARPENTER CONTRACTOR
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What Contractor-Dealers Want and Expect in Their Factory Relationships

CHAOTIC and FRUSTRATING are current relations between some manufacturers and their local outlets—if you believe everything you hear over both sides of the fence.

From the President of Widgets International . . . on down through his sales manager and field representatives . . . to local contractors and dealers . . . the common complaint appears to be identical:

"THEY don't understand my needs."

Efforting to bridge this communications gap, we have talked with dozens of key people in our industry—NEWS subscribers all—in an attempt to find out WHY communications break down, and misunderstandings commonly are rife, in this area of business relationships.

Herewith a few suggestions for better factory-field relationships, culled from these interviews.

Each signed-up dealer should, on his part:

1. Have access to adequate capital.

2. Furnish complete display, sales, and service facilities.

3. Recruit competent and reputable personnel at all levels.

("The telephone operator should have a happy personality and a voice with a smile.")

4. Provide imaginative and respected management, backed with sufficient capital and credit, plus the patience necessary to accomplish long-range objectives.

5. Establish and maintain policies (including honest advertising) which reasonably and fairly will serve not only the public, but the brand name represented, and *competing contractors.*

(It doesn't pay to have your competitors hate you.)

6. Secure a mutually satisfactory degree of market penetration in his geographical area.

If a contractor-dealer can do all these things, he can argue the following points with clean hands.

Here are a number of "should be" obligations on the part of manufacturers, as suggested by many local outlet subscribers:

1. Furnish an attractive product at a competitive price.

2. Maintain continuing and honest market analyses so as to provide each contractor and dealer with *realistic* quotas.

(Dealer-contractors NEED to make a reasonable return on their required investment, and their personal efforts, in both good and bad years.)

3. Institute and sustain ever-growing advertising programs which promise the dealer a crack at steadily enlarging sales volume and profits.

(These advertising programs should be consistent, rather than seasonally spasmodic.)

4. Assign and police geographically-circumscribed areas of sales and service responsibility.

("And don't give us this jazz about the anti-trust laws. Other industries do it.")

5. Set up—and listen to—an effective and democratically elected factory-dealer advisory council.

6. Establish, employ, and enforce definite standards for honest dealer-contractor installation and service performance.

("One bad apple spoils the barrel.")

If sound policies of the above-outlined nature are erected, many of today's current frustrations . . . and lack of understanding . . . would disappear.

To borrow an old shooting-gallery expression, "you have to get all your ducks in a row."

And that's what dealer-contractors seem to want most today.

Their most heartfelt desire is for rational, logical, fair, sympathetic, spelled-out "one for all and all for one" policies.

Once established and understood, such policies would go far toward straightening out the Chaos of Communications which plagues our business today, in the opinion of many informed people.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark reg. U.S. Pat. Office; Est. 1926

AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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VOLUME 91, NO. 11, SERIAL NO. 1,651, NOVEMBER 14, 1960

From the Files of the News

25 years ago . . .

Significant changes and added provisions which would alter current installation practices mark the final revised draft of the proposed New York City code relating to refrigerating systems. Principal changes and additions deal with restrictions on the use of refrigerants, particularly in direct expansion systems; use of soldered joints, rules governing safety devices, and fees and qualifications of licensed installation and operating engineers. Definite limits are placed on the amount of refrigerant that can be used in direct expansion systems, with the use of direct expansion virtually barred in department stores and public buildings.

A code of ethics drawn up by Detroit area dealers barred "consignment of merchandise for samples or otherwise whatsoever, either by distributor, jobber, or dealer." . . . A new series of thermostatic expansion valves, built to meet the needs of air conditioning and small and medium sized commercial refrigeration, in a size range up to 15 tons, was introduced by Automatic Products Co.

Personnel changes of note included the naming of Charles E. Wilson to direct all appliance activities of General Electric Co., John A. Hertzler to manage York's air conditioning division, and Austin Campbell to supervise sales of Allied Store Utilities Co. (Hussmann) with W. J. Stelpflug and A. B. Biddle named as regional sales managers for the commercial refrigeration firm.

Some suggestions for solution of the problem "Which should I use, an air-cooled of water-cooled condenser" are given in a recent bulletin of McCray Refrigerator Corp. . . . "Standard Methods for Testing Mechanical Condensing Units" as approved by the Refrigeration Div. of NEMA and the Refrigerating Machinery Association were published for the first time in the NEWS.

Miller Conditionair, Inc., Los Angeles, has introduced a non-refrigerated unit air conditioner adaptable to year 'round air conditioning and requiring only electrical outlet, hot and cold water supply, and drain connections for its installation.

10 years ago . . .

Refrigeration Equipment Wholesalers Association in their annual meeting discussed moves designed to reduce operating expenses and make their business more efficient, and fretted over shortages of certain key items for the refrigeration and air conditioning field. . . . Refrigeration Equipment Manufacturers Association, meeting jointly with the wholesalers, discussed problems of supply, manpower, and taxes, with about the only general conclusion reached being that it is going to be more difficult to do business in the coming 12 months.

Tecumseh Products Co. is planning no changes in the present operations of the Universal Cooler division, which it purchased from Newport Steel Corp. . . . Packaged beer may constitute 80% of the brewer's market in the next 10 years, according to an analysis of packaged and draft beer consumption.

A new Precipitron electronic air cleaner, designed for upward or downward flow to remove airborne solids from normal air, has been introduced by Westinghouse. . . . A special "packaged" variable temperature producing "servo" unit placed on the market by Tenney Engineering, Inc. produces temperature-controlled air ranging from -90°F to 350°. . . . "Reflective Radiant Conditioning" experimental setup at home of Dr. Clarence Mills in Cincinnati which seeks year-round comfort by controlling body heat loss, was described in detail in a feature article.

Personnel changes: C. E. Bucholzer was named president of Airtemp, succeeding W. C. Newberg, who was named a Chrysler Corp. vice president and director of Dodge Div. Jack Cherry was named sales manager of air conditioning and freezers for Philco Corp.

MISSILE ISSUE WAS SERVICE TO INDUSTRY

Great Lakes Mfg. Corp.
Cleveland, Ohio

Editor:

I would like to comment on the Missile Issue of the NEWS.

The reaction on suppliers is exceedingly good. As a matter of fact, some suppliers that have been resisting certain modifications in their products have expressed the desire to pursue necessary changes at a more rapid pace than before you spotlighted the role of air conditioning in the missile program.

This issue is a real service to the Industry.

Purchaser reaction has not been felt yet, however, I am sure that it will have its effect in this area.

We wish to thank you again in particular for your fine contribution.

T. G. CRIDER,
Staff Engineer

HEAT PUMP DATA 'FACTUAL, FAIR'

Sloane Heating &
Air Conditioning Co.
Lansing, Mich.

Editor:

A short time ago I read with interest Dale Mericle's second article on Walter Johnson's heat pump and today I enjoyed reading the third one. Dallas Alsup in turn has supplied me with a copy of his technical reports.

We have indeed been fortunate in having you two men accumulate and publish data on the performance of the heat pump. You have been factual and fair.

We have all three articles posted in the front office for our customers and visiting heating men to see. This is a record of another proven marker on the path of progress. It is history in the making.

JOSEPH C. SLOANE

WHOLESALER ISSUE HIT THE SPOT IN . . . . . OKLAHOMA CITY

M & V Supply Co., Inc.
Oklahoma City, Okla.

Editor:

Please accept this as our thanks for fine articles in your Oct. 3 issue. It is gratifying to see your good publication devote so much space to Wholesaler's cause, and selfishly feel that you have accorded our industry a great "shot in the arm."

Also, we feel flattered that you saw fit to reprint the front pages of Jones-Newby and M & V Supply Co., Inc. catalogs. This is somewhat flattering and makes us feel that somewhere along the line our efforts are appreciated.

Might add this note of comment—that the writer was in Los Angeles recently and in talking with a young friend in the retail drug business, received one of the most glowing testimonials as to how the wholesaler is the proper source to do business, of any that the writer has heard in some time. It was particularly gratifying to hear that other industries have the same feeling that so much of our trade has in feeling that we are the proper channel through which their purchases should be made.

A. R. MORIN

. . . NEWARK

Tesco Distributors, Inc.
Newark, N. J.

Editor:

Your Oct. 3 Wholesaler issue was great. . . .

I am sure our entire industry is well pleased with the articles published, and congratulations are in order. Your reporters did a wonderful job, covering many phases of the wholesaler operations.

Special thanks on my part, to C. Dale Mericle for the write up on our organization.

THEODORE YECIES

. . . CHICAGO

Airo Supply Co., Inc.
Chicago, Ill.

Editor:

I sincerely appreciate the attention given to my views as I related them to Phil Redeker and published in your Oct. 3 issue. Likewise, as Chairman of ARW's Public Relations Committee, I want to add my appreciation of the fine job of reporting that the NEWS has done on behalf of our association in recent months.

E. P. SORENSEN,
President

. . . DAYTON

The W. H. Kiefaber Co.
Dayton, Ohio

Editor:

Just a short note of thanks to all at AIR CONDITIONING, HEATING & REFRIGERATION NEWS for the grand issue of Oct. 3, in the wholesalers behalf. Sincerely appreciated, from here, in our behalf.

PAUL H. HOPPER, Manager,
Refrigeration Department

ANOTHER FIRM THAT'S WORKING WITH ICE RINKS

The Houston Corp.
Orlando, Fla.

Editor:

Your column "Inside Dope" is read and thoroughly enjoyed by many in our organization, even those not directly concerned with air conditioning.

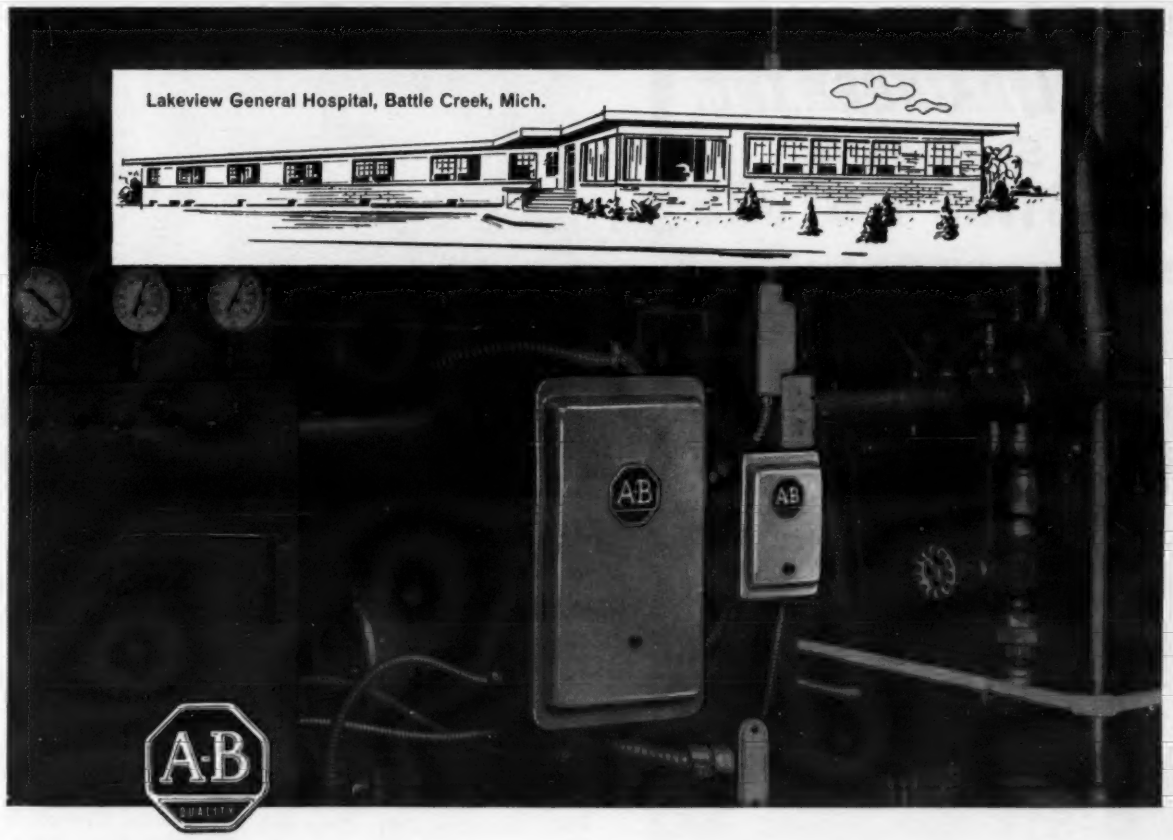
We are natural gas distributors in the State of Florida and extremely interested in natural gas air conditioning. We maintain complete sales and service facilities.

Your "Inside Dope" article entitled "Beltz on Ice" was of exceptional interest to me. We are ertering into negotiations with two people who are constructing ice rinks in Florida and are interested in using gas engines as prime movers for compressors and brine pumps.

I would appreciate any other information that you could supply me in regards to the refrigeration requirements and problems of an ice rink.

E. R. DONALDSON,
Engineer

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.



Lakeview General Hospital selects

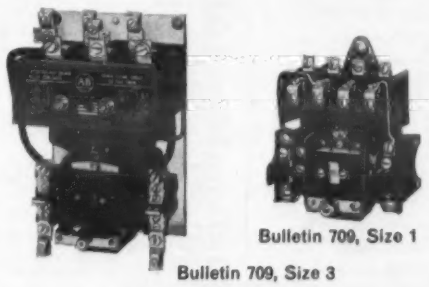
ALLEN-BRADLEY TROUBLE FREE MOTOR CONTROL

for expandable Air Conditioning System

To stay within a limited budget, Battle Creek's Lakeview General Hospital decided to install their air conditioning system in steps and to keep it on a pay-as-you-go basis. Since costly maintenance would seriously hinder these plans, it was natural for Allen-Bradley trouble free motor control to be selected. Its simple solenoid design has only ONE moving part. With virtually nothing to go wrong, you are assured of *millions* of dependable and trouble free operations.

The double break, silver alloy contacts—used throughout the A-B line—are always in good operating condition, and remain so without servicing. In addition, all A-B starters have reliable and permanently accurate overload relays that provide protection against motor burnouts.

When planning with an eye to the future, insist on Allen-Bradley *quality* motor control—it will save you money over the long run.



A-B solenoid starters used in Acme packaged liquid chiller at Lakeview General Hospital. Bulletin 709 starters are available in ratings to 450 hp, 220 v; 900 hp, 440-550 v.

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ARW Cruise Convention--

(Continued from Page 1)

in that capacity will spearhead the new phase of the "ARW wholesaler identify" program.

This new phase will include personal visits by the executive vice president to supplier manufacturers, to emphasize the role of the supplies wholesaler in getting the industry's goods to market, and to discuss some of the marketing problems of the wholesaler.

The first phase of the identify program, in the form of advertising and promotion to both supplier manufacturers and to the wholesalers' customers, was started this year, and will be continued on a stepped-up basis in the coming year.

The other major new project which ARW will undertake will be aimed primarily at the education and training of personnel to take over key management positions in supplies wholesaler firms. The 25th anniversary celebration helped to bring home to ARW members the fact that the time was at hand to better prepare the personnel who will succeed to the positions of management in established supplies wholesaler firms.

This education and training program, according to preliminary plans, will probably take the form of a series of seminars held in various geographical areas throughout the country. ARW is hoping to secure the assistance of supplier manufacturers in presenting these seminars, which will probably take the form of a well-planned program, presented in relatively unchanged form at each seminar.

Plans are also underway to revive a statistical program to develop information on operating averages and characteristics of the supplies wholesaling business.

SILVER ANNIVERSARY of the Air Conditioning & Refrigeration Wholesalers (ARW) brought recognition from the Refrigeration Service Engineers Society (RSES) in the form of a commemorative plaque, here being presented to William C. Miessemer, ARW president, by Herman Goldberg, Chicago industry veteran and one of the founders of RSES.

SHIPBOARD CONVENTION sessions on ARW's anniversary cruise convention drew full attendance and serious attention to such matters as improvement in business management methods, debated in case history studies. Joe Cavataio, Illinois Electric Works, Inc., E. St. Louis, as a group leader in the discussion gives a report on one phase of the study. Others in the picture who were also group leaders are (l. to r.) John Boyenton, Refrigeration Suppliers, Inc., Norfolk, Va.; Jim Downs, Refrigeration Supplies, Inc., Cleveland; Carl Johnson, Johnson Supply, Houston; and Frank Meier, Meier Supply Co., Binghamton, N. Y. In the background is George Webster, Washington, D. C., management consultant who served as moderator.

EDITOR AND PUBLISHER George F. Taubeneck of "Air Conditioning, Heating & Refrigeration News" addresses the main business session of the convention, urging the supplies wholesalers to insure perpetuation of their firms by developing management personnel, to be alert to new markets, and to spearhead drives to "sell" the industry.

Past Presidents To Study Association Management

A committee made up of ARW past presidents was named to review the management and physical setup of the association, and to report at the next annual meeting, to be held in February, 1961. One looked-for result of such activity may be the establishment of long-range goals of the association. Members of the committee include Jack Glass, Chase Supply Co., Chicago; Ernie Tramposh, Refrigeration Equipment Co., Kansas City; and George Roche, Roche & Hull, Inc., Baltimore.

The manufacturers relations committee of ARW will give considerably more attention to the problems brought about by the purchase of component parts for resale by original equipment manufacturers.

ARW members declare this to be a "disrupting" influence on the orderly distribution of the industry's goods, and will make specific efforts to contact and cooperate in every way possible with manufacturers in solving this problem. Elmer Davey, Davey Sales, Akron, heads this committee.

Lay Plans for Activities With Contractor Group

In the area of trade relations, ARW's board of directors has authorized the executive office to meet with the Refrigeration & Air Conditioning Contractors Association (RACCA national) at the time of the RACCA annual convention later this month for the purpose of establishing procedures and agendas for inter-association activities.

"Plans for this meeting are indicative of ARW's interest in the contractor and are in line with the expressed desire of RACCA to have such contact established at the national level," stated W. C. Miessemer, ARW president. "For some time it has been the desire of ARW to meet with RACCA at the national level and we are pleased that we have the opportunity of formulating an outline for such arrangements." Irving Fajans, Aetna Supply Co., Bronx, N. Y., is chairman of this committee.

Next national ARW meeting will be held Feb. 11 and 12, 1961 at the Pick-Congress hotel in Chicago, immediately preceding the opening of the 15th International Heating & Air Conditioning Exposition. In a constitutional change made this year, annual meeting dates were changed to correlate with the dates of annual industry expositions.

3 Steps Suggested For Future Planning

George F. Taubeneck, editor and publisher of AIR CONDITIONING, HEATING & REFRIGERATION NEWS, spoke at the business session of the ARW Silver Anniversary meeting, and urged the supplies wholesalers to take into consideration the following three points in the future planning:

1. **Train a Successor.** Many businesses fail because no thought has been given to the matter of perpetuating the business, and to the proper training of younger executives to take over the management of the business. Those who have founded and managed the supplies wholesaler establishments are now reaching the age where they must give though to perpetuating the business, Taubeneck said, or the industry must be faced with the demise of some of the prime factors in the distribution of its products.

2. **Be Conscious of Changing Markets, and Be Aggressive In Serving the New Markets.** There is scarcely any industry in which markets and products do not change, and change has been very much in the picture in the air conditioning, heating, and refrigeration fields in the past decade, and there is every evidence that this will continue. The best way to meet the challenge of changing markets is to be ready to serve the new markets first and most efficiently.

3. **Spearhead the job of "Selling the Industry."** One of the gravest problems facing our industry today is that of getting a fair share of the purchasing dollar. While the importance and desirability of the industry's products have been widely recognized, sales of the industry's products have in many instances fallen behind less vital and desirable products simply because other industries have apparently done a better job of creating a desire for and getting the public to spend its money for their products.

The supplies wholesaler, because he deals with all the elements concerned in the distribution of the industry's goods, is in an excellent spot to spearhead and coordinate joint industry promotional efforts to sell the products of this industry, Taubeneck said.

Management Seminar

A feature of the ARW "cruise convention" was a management seminar, with George Webster, management consultant from Washington, D. C., serving as moderator, and the supplies wholesalers attempting to solve the problems of a retailer and a full-line wholesaler "in trouble," through a case-history method approach. The management seminar proved extremely popular, with more than 90% of the convention registrants in attendance.

The Case of the Full-Line Wholesaler

The case of the full-line wholesaler was of particular interest, and in the discussion of it the ARW wholesalers brought to light some of the problems which they face in the management of their own businesses.

In the conditions of the particular case studied, the wholesaling business was being operated by the son of the founder. The company operated without any formal organization, since the son followed his father's philosophy that the company was a "big, happy family where everyone pitches in to get things done and doesn't bother to ask what his job is."

The son (and manager) opens the offices and warehouses and opens all the mail. He spends his day answering mail, dealing with customer complaints, helping salesmen, making the daily deposit at the bank, and checking invoices. At 4 p.m. each day he leaves the office to check on operations at the warehouse and is gone the remainder of the day. He has one trusted assistant to whom he talks about delegating some authority, but never quite gets around to it.

The business does a $4 million annual volume, but some problems are showing up. Aver-

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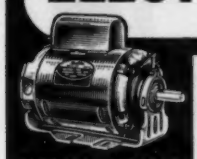

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age return on the invested capital of $1 million has been only 2.2% after taxes. Operations in both the office and warehouse are sloppy (as soon as the boss leaves the office in the afternoon, the female employes organize a coke party which continues until quitting time), and there is considerable boondoggling. Some of the equipment is not being used efficiently, and through neglect is starting to run down. Increased inventory and accounts receivable have forced the company to renew a $40,000, 90-day note at First Mercantile Bank for four consecutive periods.

In a subsequent issue, the editors hope to present a more detailed report on the recommendations which various "teams" of wholesalers made on this particular case, and to report more fully on the management seminar in general, but the following are some of the main points made in the discussion:

The faults and the problems in the organization and operation of the full-line wholesaling business under study were fairly obvious. The founder of the business had obviously not been interested in training his son properly to manage the business, and the son has not been interested in training anyone in the organization.

Need for Formal Organizational Structure

A great need is in evidence for some sort of a formal organizational structure for the personnel in the business, if not in the form of an "organizational chart" for all to see, then at least for one that would be in the minds of the management. Other obvious needs call for delegation of authority and responsibility, job definitions and performance standards, improved functioning in the buying and selling operations, a possible pruning of the staff, and a relinquishing by the son and manager of many of the petty details of the business with which he has concerned himself.

How the manager would go about accomplishing this was a matter of considerable debate. Since the case history indicated that he had made some abortive efforts to make some of the required moves, but had apparently lacked enough follow-through or interest to go ahead with them, that an outside influence such as a management consultant might be required. Others recommended that he affiliate himself with an associa-

(Continued on next page)

TWENTY-FIVE YEARS of service to the industry as supplies wholesalers was celebrated by this group consisting of more than 200 people, ARW members and their families, who were part of the ARW "Silver Anniversary" cruise convention on the *S.S. Hanseatic,* cruising in the Caribbean.

INFORMALITY WAS THE ORDER of the day on the cruise, as is indicated in this photograph of the board of directors and executive staff. However, three major convention sessions and innumerable committee meetings were held on the cruise.

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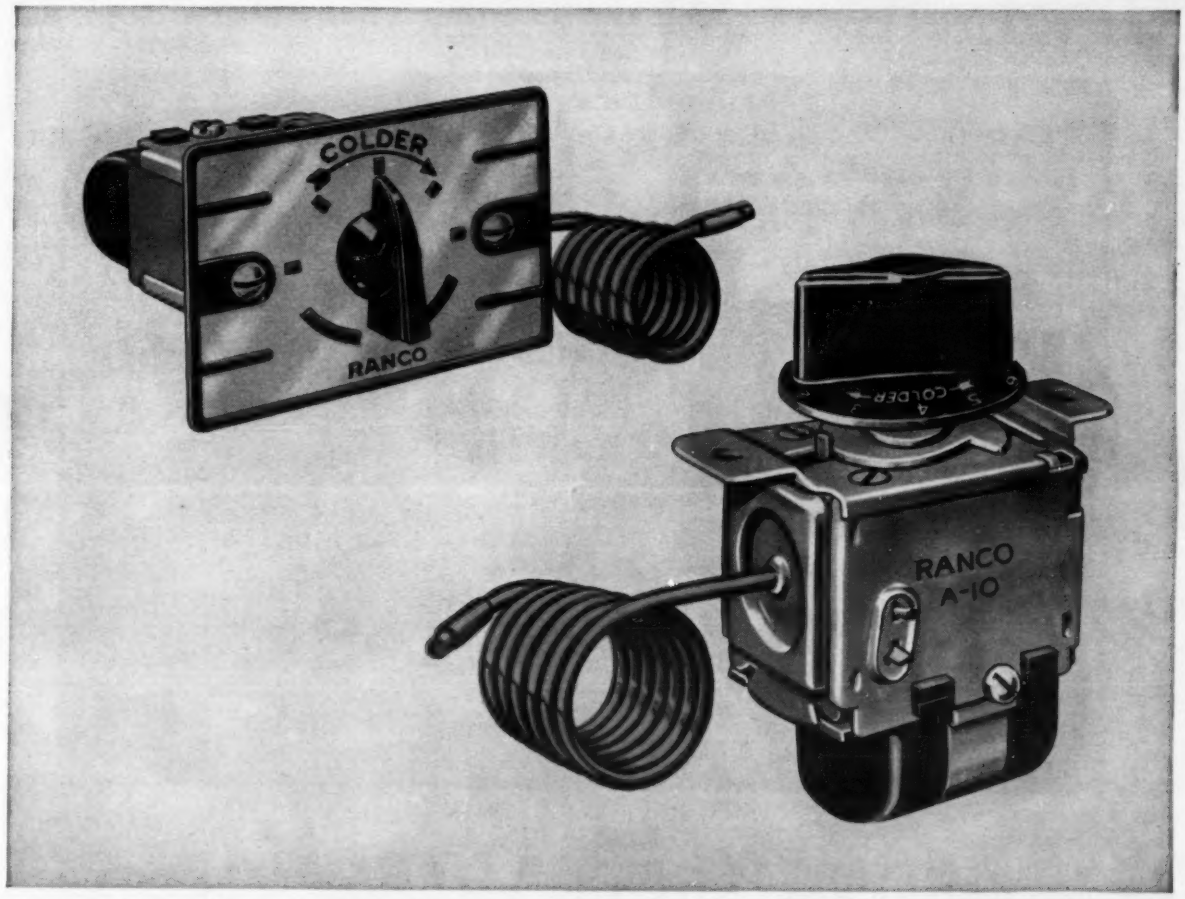

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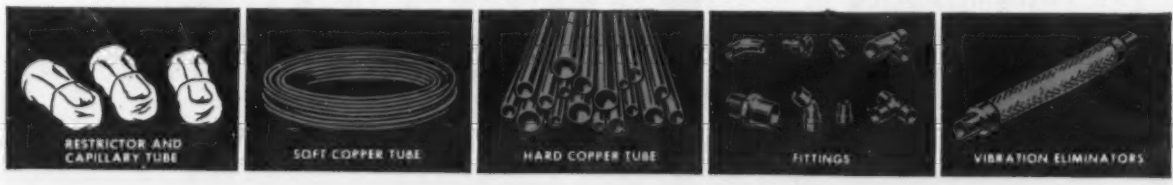

ARW Shipboard Convention--

(Continued from preceding page)

tion of similar businesses, and visit the establishments of fellow members or use the experience recorded by the association as a guide to making the needed changes.

Summary of Lessons Learned from Seminar

In a summation of the general conclusions made from the seminar, Moderator George Webster said that the lessons learned seemed to be:

Do your job, but delegate as much of the detail as possible to others.

Prepare yourself for your job.

Prepare someone to take your place.

How can a wholesaler insure perpetuation of his business? From the discussion, there would seem to be three courses.

1. If the wholesaler is the principal owner, and has heirs, he should devote much of his time to the training of such heirs to manage the business.

2. Have the company "go public" through incorporation of the business and the issuance of stock in it.

3. Establish an employe participation or employe stock purchase plan.

Where there were no heirs, the consensus generally favored the No. 3 plan, because it provided good incentives for continued good management. Even if there were heirs, a combination of the No. 1 and No. 3 plans could be a good idea, it was suggested.

With reference to some of the specific collective problems of ARW wholesalers, Webster said three problems stood out currently:

1. The matter of dealing with manufacturers of equipment and supplies who seemingly want a variety of types of distribution. This is an area in which the ARW must probably negotiate as an association.

2. A need for strengthening of the individual wholesaler businesses, both in terms of expanding sales and improving the net profit.

3. Greater participation in association and industry cooperative movements by individual ARW members.

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Walton Institute of Humidification To Conduct Research, Disseminate Data

MONTCLAIR, N. J.—The establishment of the Walton Institute of Humidification, a nonprofit organization for research and the dissemination of information in the field of humidification, was announced recently by John B. Feldermann, president of Walton Laboratories, Inc., Irvington, N. J.

In announcing the formation of the institute, it was pointed out that "the Sahara-dry conditions prevalent in most winter-heated buildings are a major contributing factor to a multitude of winter ills, wear and damage to home furnishings, and costly industrial problems. Yet, current humidification facilities in most buildings are pitifully inadequate."

The Walton Institute will serve the fields of medicine, industry, art, and others that have direct interest in the problems of proper humidification, as well as the general public, through the following methods:

Information: The institute will service news, reports, case histories, and other material to the above interested groups on a regular basis. It also will supply this information to the trade and general press.

Library: A basic library of books, pamphlets, papers, and allied material on the over-all field of humidification will be maintained at the institute and continually supplemented.

Teaching aids: A general kit on the elements of humidification will be offered to teachers of physics and science in secondary schools. The institute will also answer specific queries from these teachers.

General booklet: This will be a primer on the story of humidification and its necessity in the average home in winter. It will be aimed at the general public and distributed through various civic groups, real estate boards, or through mutual sponsorship with local companies such as banks, utilities, etc.

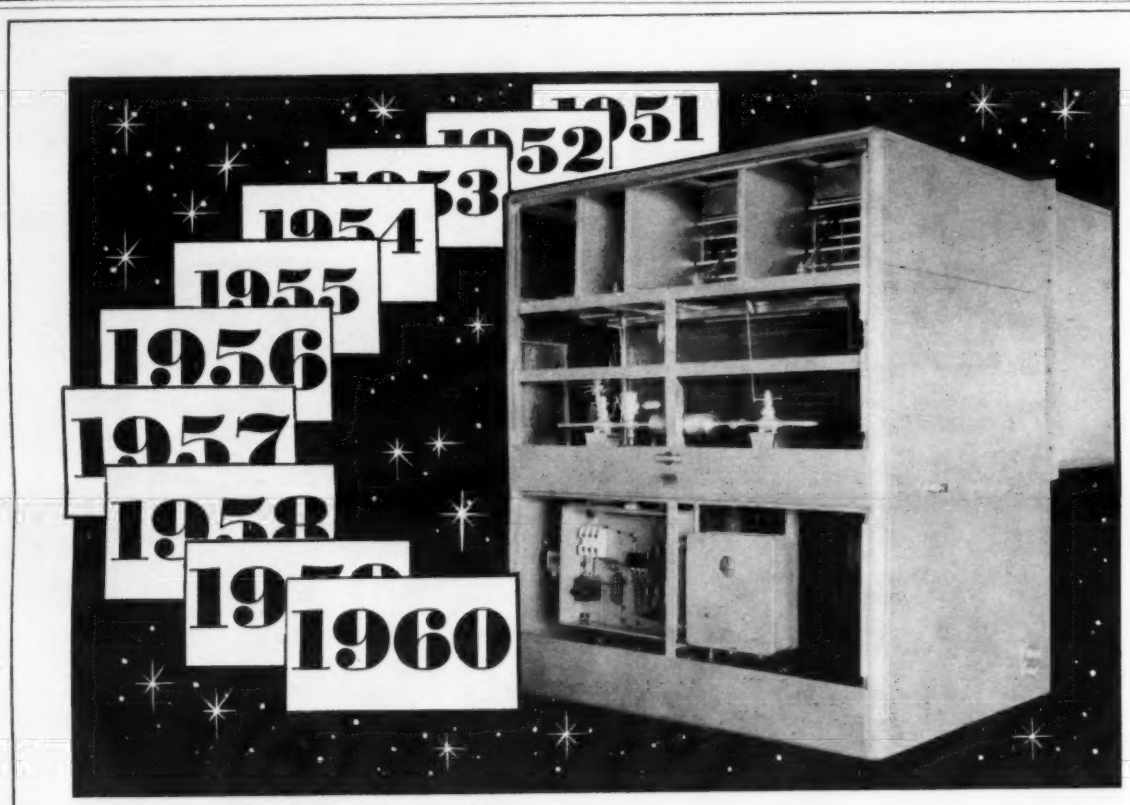
Industrial information: Specific industries have special problems that often require extensive research. Such industries include textiles, tobacco, printing and lithography, foods like coffee and meat, plus institutions such as hospitals and art museums. The Walton Institute will attempt to offer assistance to these groups in their individual problems.

Query service: The institute will provide an information service to writers, students, and industry, answering any queries on the general subject of humidification or on specific problems in this area.

The institute will be sponsored by Walton Laboratories, manufacturer of humidifiers for home and industry for more than a quarter of a century. The company will finance the institute in its initial stages and hope that eventually other firms with interests in the humidification field also will become contributors.

The original concept for the institute came from Walton President John Feldermann as a memorial to his late father, William Feldermann. His father founded Walton Laboratories in 1932 and was president from 1938 until his death in November 1959.

As the institute grows, John B. Feldermann has plans for various projects to promote interest in the area of humidification such as awards to the writers of the best consumer or technical articles published on the subject of humidification, grants to leading engineering institutions to promote further basic research on this important subject, etc.



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'Service Situation Appalling'

Reader Suggests That Manufacturers Use Experienced Service Contractors and Reward Them Adequately

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Editor:

Your editorial, "Customers Demand Redress," in the July 18 issue touched a very tender spot.

The service situation in our industry is appalling, and in many instances the manufacturer is at fault, because he is so anxious for sales he doesn't police his structure adequately.

All manufacturers who handle their sales through sharp distributors are *both* considered to be dead beats by legitimate appliance service dealers, who try to conduct an honest service business. The authorized service dealers, in particular, are being knifed continually.

This is one of the ways it is done. Let us assume one of these typical distributors purchases 50,000 pieces of equipment per year from one or more manufacturers at X dollars each, depending on size, style, controls, etc. He, in turn, sells these items to various sales dealers at X dollars plus.

In the plus figure is included the first year in warranty service allowance, which he collects from the sales dealers. The usual contract between the distributor and the authorized service company states "The service company will service without charge to the buyer for one year, all appliances mentioned in the agreement, that are delivered in the assigned territory and *registered* with the distributor."

This is where the trouble starts that plagues authorized service companies throughout the country.

Since the average sales dealers are working on a small markup, their office staffs are undermanned, the sale is made, the equipment delivered, and in most cases that is all the sales dealer is concerned about.

About 50% of Sales Are Never Registered

Usually the last thing they think about is to register the sales with the distributor. Consequently about 50% are never registered. If the buyer has no first year service problem, the distributor pockets the first year warranty monies.

Most service contractors cover a defined contract area, and in this area there may be perhaps 10 average sales dealers. In the original contract the service dealer assumes service in his assigned territory for from one to three months without any or very little compensation from the manufacturer or distributor.

All he has received, maybe, is a group of cards listing the name and address of the owners in his territory and the equipment they possess, which have been *registered*.

At the end of the first contract period he receives his first payment consisting of the prorated share of the *registered* equipment still in first year warranty in his territory.

He hopes equipment delivered into his territory from an outside area will be registered in due time, but he rightfully expects that all equipment delivered by sales dealers in his territory will be registered.

This never happens.

Let us take a typical example of what is happening often in the suburbs.

The authorized service dealer receives a phone call from an owner, who claims the equipment is only six months old, and is out of order. The warranty cards show no listing of this equipment although the owner claims it was purchased locally from a local village sales dealer and delivered to the address, where she has lived for five years.

He is on the spot, but he has a few choices.

First, he can suggest the owner call the sales dealer to prevent argument. Second, he can offer service on a C.O.D. basis and listen to the owner scream about a warranty, guarantee, etc., or he can go into extended explanation about registration procedure but — the owner insists the appliance needs repair now, not at some distant day in the future.

The last thing he might do in a dire emergency is to send a serviceman to try to make a repair, pick up the model and serial numbers, and have his man help search the house for the bill of sale to establish the delivery date; all of which should not be done because this loses money fast and he can't afford it.

If he follows the last method he is sealing his doom, for as soon as sales dealers find out that he will follow this last procedure, the sales dealers will stop sending in registrations at all; why should they bother?

We all realize that there are millions of pieces of white goods produced in this country each year and, of course, they all cannot be trouble free. Those who happen to receive troublesome equipment will be best served by a very simple method that is followed by one of the companies in your editorial.

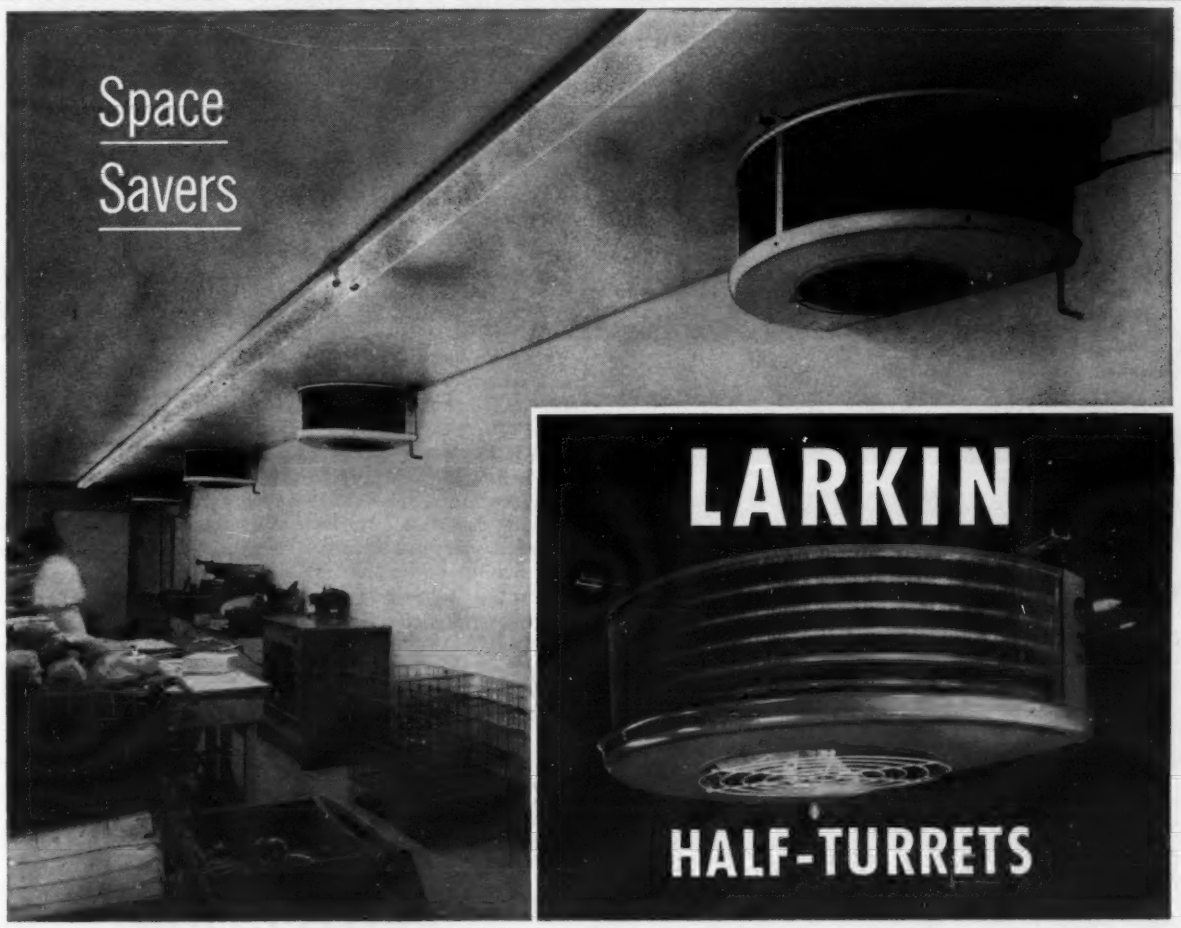
Sign experienced service contractors to handle service properly, then insist that the distributor remit to these contractors all warranty service monies on a prorata basis as the sales dealers are billed for appliances delivered to them.

Cards should accompany this payment indicating the make, model, and serial number of the product. The buyer will eventually call for *service*, and at that time the service station will notify the distributor of the buyers name, address, and date of delivery.

The troubles we hear so much about are usually from the suburbs. In the first place, the reliable service company shies away from contract service. And the suburbanite, in desperation, attempts to repair equipment that he has little or no knowledge of, thus compounding the repair bill when he finally obtains a competent serviceman.

Proper consideration and payment for services rendered would attract the better service companies to contract service, and would recapture the goodwill of many dissatisfied owners.

HENRY KAIN



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ATLANTA 1, GEORGIA

26 Complete Course

3-Week Training for Service Personnel of York Customers Ends

YORK, Pa. — Twenty-six operation, maintenance, and service personnel from customers of the York Div. of Borg-Warner Corp. in 15 states recently completed a three-week training course in air conditioning here.

The comprehensive course covered 14 basic subjects.

These included: refrigeration theory, air conditioning theory, liquid control devices, compressors and condensing units, condensing equipment, evaporators, centrifugal refrigeration compressors, chilled water systems, air distribution systems, comfort air conditioning systems, heat pumps, service and trouble-shooting procedures, practical experience sessions, and a study of manufacturing operations.

The course was conducted by the York Institute staff, headed by C. J. Brillinger. Special sessions were led by York engineers along with specialists from auxiliary equipment manufacturers.

Two courses each in sales and service are scheduled for York Institute. The sales courses will be held from Nov. 28 to Dec. 16 and from Jan. 9 to Jan. 27.

The service courses will run from Nov. 21 to Dec. 16 and from January 9 to Feb. 3. These courses are expected to be of interest to residential and commercial dealers and distributors.

Progress of Supplies Wholesalers Shown By Changes at 30-Year-Old New Jersey Firm

RIDGEFIELD, N. J. — How far the refrigeration parts wholesaler has come in the past 30 years!

Kai Brandt, recently retired as central division manager after 45 years' service with Melchior, Armstrong, Dessau, Inc. recalls the company's first wholesaling operation in downtown Manhattan, opened in the early 1930's.

He describes it as "a 'peanut' store room with a very limited stock, no parking facilities, no one with any application know how, and the customer had to ring a bell to be admitted to the store room from the outside."

George Yaeger, vice president of the firm, contrasts this with the opening of the Watertown, Mass. branch last year to serve New England customers.

Branch covers 10,000 sq ft, operation is all self-service, plenty of parking, straight body and trailer loading and unloading facilities, complete lines, and competent people who know operation and application of equipment from "A to Z."

Got Into Wholesaling From Export Field

Yaeger pointed out that Melchior, Armstrong, Dessau got into refrigeration wholesaling from the export business. As exporters, they handled refrigeration system components.

"From their exposure to these refrigeration component lines, officials recognized a need for domestic distribution at wholesale level," he explained.

"Selling was a rough and tough battle with a very limited potential in the early days," he continued.

"Take a food store for example. During the 30's, even the chains maintained corner grocery stores which required the staggering total of a 1½-hp compressor unit for all their refrigeration requirements. Many of these stores were not heated, much less air conditioned.

"Today their supers of 10,000 sq ft take 20 to 35 compressors totaling 50 to 100 hp for their refrigeration equipment plus 25 to 300 hp for air conditioning."

Went Long Way Around To Save Ferry Expense

Harking back to the old days, Yaeger recalled, "I remember driving several hundred miles from my home town of Baltimore to Salisbury, Md. to obtain an order for a 3-hp Copeland compressor.

"I drove the long way around, instead of taking the Annapolis ferry, to cut down on expenses. I was accorded a hero's return by our Baltimore office manager when I delivered the 'bacon.'

"In contrast, no such fuss was made when one of our sales engineers recently closed an order for one super-supermarket, for 13 Melco roof top air conditioners totaling 260 hp and for 24 Melco 'Compact-A-Metic' refrigeration compressors (racked) totaling 84 hp."

Some Recollections on Doing Business In '30s

Any wholesaler who did business during the 1930's Yaeger said can call back, such memories as:

"Capewell precision replacement parts for Frigidaire and Kelvinator compressors, one size thermo valve for all capacity commercial installations, measuring slimy ice bunkers for finned coil installations, replacement panels and lids for ice cream cabinets, a week's work to estimate and design a 10-hp air conditioning system, the 'big deal' on plate coil units for changing flooded type ice cream cabinets to dry expansion type, 500 rpm 'high speed' compressors, and air-cooled condenser changeovers for 'K' compressors."

Today, Melchior, Armstrong, Dessau specializes in high-side and low-side equipment and service of replacement parts for these products. The company maintains wholesaling branches here and in Manhattan, Brooklyn, Newark, N. J., Buffalo and Syracuse, N. Y., Hartford, Conn., Watertown, Philadelphia, Baltimore, and Washington, D. C.

3 Firms Boost Prices On Copper Products

NEW YORK CITY—Cerro de Pasco Corp. announced that its divisions producing copper and brass mill products raised prices effective Oct. 31.

The price of copper and copper alloy tube products produced by Cerro's Lewin-Mathes Co. Div., St. Louis, was increased approximately 1 cent per pound and some adjustments made to extras.

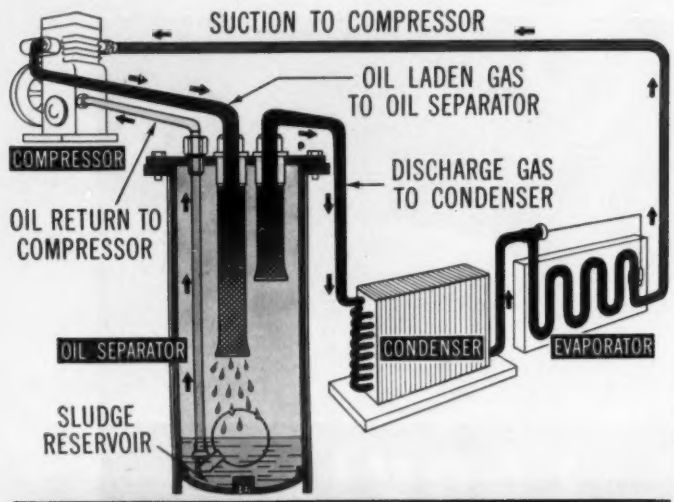
The Titan Metal Mfg. Co. Div. Bellefonte, Pa. and Newark, Calif., increased the base prices of its rod products by amounts ranging from ¼ cents to 1 cent per pound.

Recent increases in freight rates and other manufacturing costs were given as the reason for these price changes.

●

NEW YORK CITY — A ¼-cent to 1-cent a pound price increase on copper and copper-base alloy products was put into effect Oct. 31 by Revere Copper & Brass, Inc.

Reverse charged the price boosts, about 1 to 2% to higher labor costs resulting from long-term and recently-negotiated wage contracts, along with the increased costs of materials and services.



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Temprite Oil Separator muffles sound. Capacities from ⅛ h.p. to 225 h.p. ASME

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3 Manufacturers Provide Assistance In Recruiting Members for NCRSA

PHILADELPHIA — The National Commercial Refrigerator Sales Association reported recently that three manufacturers are offering unusual assistance in building NCRSA membership among their distributors across the nation.

Marie Lawton, executive secretary of the association, said contests currently are in progress for the regional managers of two manufacturers, who have made the securing of new members for NCRSA a special contest feature.

"Manufacturer A has set up a sales contest for distributors which will provide special awards to the regional men whose distributors meet or beat the contest quota," it was pointed out. "But, the managers themselves must secure new members for NCRSA, as their prize is dependent on 75% of their distributors being NCRSA affiliates.

"Manufacturer B has initiated a contest among their district managers which offers a cash prize of $100 to the man who signs up the most NCRSA members before our New Orleans convention.

"Another manufacturer has recently issued a bulletin to all of its divisional managers, stating:

" 'With the passing of each year we find that NCRSA presents a more formidable organization for assistance to distributors. It is the firm belief of our company that many benefits can be derived through membership in this organization; therefore, we are asking each fieldman to talk to the various distributors in his area who are not members of the group.

" 'We feel the organization is well worth the small amount of money that it costs to join. Please let us know how many new members you can get for this group.' "

Bastian-Blessing Names Distributor In N. Y.

CHICAGO—The S. J. O'Brien Distributing Corp., New York City, has been appointed distributor of The Bastian-Blessing Co.'s line of soda fountains, cafeteria, and fast food service equipment in the New York trading area.

Bastian-Blessing Sales Manager Ted Johnson, in announcing the appointment, said James J. Gavigan and the entire staff of James J. Gavigan & Co., Inc., who have been allied with Bastian-Blessing products in the New York area for many years, have joined the S. J. O'Brien Distributing Corp.

Avenco Appoints D. A. Hargrave

MINNEAPOLIS — Delbert A. (Red) Hargrave has been named vice president of operations for Avenco, manufacturer of coffee-chocolate vendors and coin changers, it was announced by Gilbert Totten, president.

Hargrave moves to Avenco after serving since 1952 with Schaefer, Inc., and prior to that, with the Deepfreeze Div., Motor Products Corp., according to the announcement.

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AIR CONDITIONING
MOTORS
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OGDEN AT FULTON CHICAGO 7, ILL.

Berthene Joins Recony, To Aid President

RICHMOND, Va.—Victor H. Berthene has joined Recony Sales & Engineering Corp. here as assistant to President V. C. Patterson.

Berthene

Patterson indicated that Berthene's appointment is the latest in a series of expansion steps taken by the 14-year-old company, manufacturer of cold-storage rooms, ice cream hardening rooms, and prefabricated "Reco-Fab" modular ceiling and wall panels.

The company's next expansion move, Patterson said, will probably be the addition of several associated lines to the company's product list, "thus providing an even more diversified service to the frozen food industry."

Berthene was formerly the resident representative for York Div., Borg-Warner Corp. in Virginia.

Bohn's Danville Div. Well Ahead of 1959

DETROIT — Volume in the Danville Div. of Bohn Aluminum & Brass Corp. in 1959 "was nearly 50% higher than in 1957, our first full year in the heat transfer business, and shipments in 1960 are running substantially ahead of last year."

So stated Terry W. Kuhn, Bohn president, in commenting on the expansion program under way at the Danville plant. As reported earlier in the NEWS, an addition to the facility there will increase the total plant area by 20%.

"Steadily increasing demand for our Danville products is placing excessive demands on present facilities during peak periods," Kuhn said. He added that additional growth is expected from the advent of "frostless" refrigerators, "which is opening an entirely new market for refrigeration equipment."

Kuhn said that in Bohn's Foundry Div., the Butler (Ind.) and South Haven (Mich.) plants are also being expanded.

NARGUS Convention Set for Philadelphia

PHILADELPHIA—The 62nd annual convention and exhibit of National Association of Retail Grocers of the United States (NARGUS) will be held at air conditioned Convention Hall, Philadelphia, June 18-22, 1961.

Convention registration of $30 per person will include the daily business sessions, exhibit, and all entertainment. Advance registration for the convention and requests for hotel accommodations should be sent to Mrs. Marie Kiefer at NARGUS headquarters, 360 N. Michigan Ave., Chicago 1, Ill.

Hussmann 9-Mo. Sales, Profit Off As Customers Slow Modernization

ST. LOUIS — Net sales of Hussmann Refrigerator Co. and subsidiaries in the first nine months of 1960 totaled $27,851,112, compared to $28,225,545 in the corresponding period of 1959, the firm reported.

Net profit in the 1960 period amounted to $1,435,771, against $1,738,012 in the 1959 period.

Third-quarter sales declined to $10,534,700 from $11,246,026 a year earlier, and net profit was $524,729, compared to $764,061 in the 1959 third quarter.

W. B. McMillan, chairman, and John R. Caulk, Jr., president, told stockholders that the sales decline "reflects the less optimistic appraisal of business with respect to the near future.

"Most expansion and modernization plans of our customers have not been changed, but have in some cases been rescheduled over a longer period of time. Although we are actively working to reduce costs wherever practical, profits have nevertheless been reduced by the cost-price squeeze."

Stockholders also were informed that additions to Hussmann's Canadian plant were completed during the third quarter and construction of additions to its Haddonfield plant also were completed in that quarter.

Regarding the latter plant, the report said: Production of walk-in coolers there commenced late in the third quarter, and shelving production will commence in the fourth quarter.

LA CROSSE QUALITY LEADS THEM ALL!

THE FLAKE KING

The new La Crosse FLAKE KING takes its place as a leader . . . in quality, trim, clean engineering and smooth, dependable performance. Attractively finished in grey hammertone baked enamel . . . stainless steel slide-away doors and storage bin . . . top water usage economy.

FLAKE KING CAPACITY . . . produces 550 lbs. of hard, dry ice every 24 hours . . . models available with storage capacities of 280 lb. and 470 lb. . . . fully automatic operation. WRITE TODAY for complete information.

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WALK-IN COOLERS BEVERAGE COOLERS DIRECT DRAWS CUBE MAKERS DRAINBOARDS
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New electronic "watchman" detects freezer breakdowns...

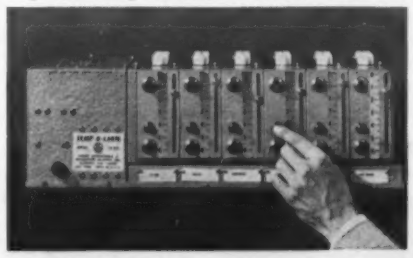
Opens up a golden sales opportunity for you!

Now – thanks to Kidde's new Temp-O-Larm, every supermarket, dairy, freezer plant is a gold-mine of potential profit! Frozen food spoilage due to freezer failures runs into millions of dollars annually, is a constant concern to store managers and owners. They will listen to your story on sure, dependable protection against spoilage that costs them only a modest amount per freezer unit – and *you* will net an attractive profit for every one of these installations!

Developed by Kidde Ultrasonic & Detection Alarms, Inc., the Temp-O-Larm system takes up little space, is easily installed, requires little or no maintenance. A tiny detector, pre-set for a specific temperature, is placed in each freezer or locker. Any abnormal temperature rise triggers the system, sounds an alarm locally or at central alarm company, points out the trouble spot immediately. Alarm time delay (0-6 hours) prevents false alarms during *normal* defrost or loading periods.

Temp-O-Larm is being promoted by national trade advertising and publicity, and special dealer sales aids are available. Most important of all, Temp-O-Larm bears the name of Kidde – most respected name in the alarm business.

For more information on Temp-O-Larm, and how it can bring in profits for you, write to Kidde Ultrasonic & Detection Alarms, Inc.



Annunciator in store signals dangerous temperatures immediately. Unit shown guards six refrigerated boxes. Lights indicate normal and alarm conditions. Unit has alarm time delay controls, alarm reset buttons.

Kidde

KIDDE ULTRASONIC & DETECTION ALARMS, INC.
1195 Brighton Road, Clifton, N. J.
A Subsidiary of Walter Kidde & Company, Inc., Belleville 9, N. J.

West Meets East

VISITING TYLER distributor in Hong Kong, Oriental Engineering Co., Sam West, sales manager of Tyler Refrigeration International (r.) talks with C. M. Yang, manager (l.), and his number one son Victor.

Admiral Licenses Mfrs. In Austria, UAR

CHICAGO — Admiral International Corp. announced the licensing of two manufacturers to produce its products in Austria, and the United Arab Republic.

Norman E. Johnson, president, said that Weag A. G. of Vienna has been licensed and will be provided technical assistance in the manufacture of Admiral television and radio receivers and phonographs for the Austrian market. Weag A. G. already distributes Italian-built Admiral refrigerators in Austria.

The second firm to be licensed is M. Said Hafez and Sons of Damascus, Syria, which will produce refrigerators, freezers, and room air conditioners for sale throughout Syria as well as Egypt.

This brings to 12 the number of countries outside the United States in which Admiral products are manufactured, Johnson pointed out.

Production is expected to begin in Austria and Syria before the end of 1960.

ICA Missions Seek Catalogs, Price Lists

WASHINGTON, D. C. — A memorandum issued by the International Cooperation Administration requests that catalogs and price lists on industry equipment be sent to certain ICA Missions.

The missions and types of catalogs wanted were given as follows:

USA Operations Mission to Ecuador, c/o American Embassy, Quito, Ecuador—refrigeration equipment.

USA Technical Cooperation Mission to India, c/o American Embassy, New Delhi, India—air conditioning and refrigeration.

Office of ICA Representative, c/o American Embassy, Mogadiscio, Somalia — freezer and storage equipment (ammonia type).

USA Operations Missions to Vietnam, APO 143, Box 32, San Francisco, Calif.—air conditioning and refrigeration.

USA Operations Mission to Yugoslavia, c/o American Embassy, Belgrade, Yugoslavia — air conditioning and refrigeration and heating equipment.

Cheap Scientific Labor

Japanese Research Lures Americans

TOKYO, Japan—A rapid increase in the number of young Japanese trained for pure and industrial research is sparking the interest of both Japanese and overseas industries.

"Some U. S. manufacturers are now looking into Japanese research programs, a few with the intent of setting up joint research projects or subcontracting development work to Japanese laboratories, thus taking advantage of cheap scientific labor and a new approach," the *Wall St. Journal* reports.

Lennox Establishes British Subsidiary

MARSHALLTOWN, Iowa — Lennox Heating Co., Ltd. is the name of a newly-announced subsidiary of Lennox Industries, Inc. which will commence operations in the near future in England.

Trezevant

The British firm will initially offer one gas-fired and one oil-fired furnace, each delivering 50,000 Btuh at the bonnet. Heat exchanger design will follow the tested "wrap-around" radiator concept, a design which Lennox has employed in oil-fired furnaces for more than 25 years.

The gas-fired unit is designed for manufactured gas, the only gaseous fuel normally available in Britain. The oil-burning model will employ a vaporizing burning consuming 31 cubic centimeters of kerosene per minute, with a "heat-off" pilot setting burning 4 cubic centimeters per minute.

Both original models will be up-flow with belt-driven blowers. Subsequent furnaces will be down-flow in the same 50,000 Btuh output, to be followed by up-flow and down-flow models with 80,000 Btuh output.

These furnaces will be initially produced at the Toronto, Ont. plant of Lennox Industries (Canada), Ltd. Plans for manufacturing in Britain are now under consideration. Distribution will follow the Lennox U.S. plan, modified to conform to special requirements of the British market.

Lennox Heating Co., Ltd. will be headed by Robert B. Trezevant, former plant manager at Lennox Industries' Columbus, Ohio, headquarters. Technical chief will be Gerald B. Schroeder, former application engineer at Lennox-Columbus. Sales will be confined to the English market at this time.

Australian Studies American Marketing, Promotion Techniques

DETROIT — Getting a good glimpse of American industry at work—particularly its marketing, advertising, sales promotion, public relations, and publicity principles and techniques—was an eight-week task for John L. Symons from London, who left the United States recently for Sydney, Australia to join P. E. Management Group (Australia) Pty. Ltd., as marketing consultant.

A native Australian, he has been active in the management consulting and advertising fields in England for three years.

Headquartered for the past two months at Gray & Kilgore, Inc., marketing and advertising agency, Detroit, Symons during his "study course" has visited plants of many prominent American and Canadian manufacturers to get a first-hand view of their production and marketing operations. One of them was the Detroit Controls Div. plant.

R.H. Stevenson Named Taco Export Manager

CRANSTON, R. I. — Robert H. Stevenson has been appointed export manager, according to Taco Heaters, Inc. here.

Stevenson

Stevenson will be responsible for the sale of Taco products to Europe, Canada, and all other countries outside the continental limits of the United States.

He has been with Taco since 1956 as a member of both the product development and marketing departments. Prior to his appointment as export manager, he was supervisor of marketing administration and controls.

R. J. Woxman Heads Kelvinator of Canada

TORONTO, Ont., Can. — The board of directors, Kelvinator of Canada, Ltd., announced the appointment of Robert J. Woxman as president, general manager, and director of the company.

R. J. Woxman

His appointment follows the resignation of John Sinclair from these offices for reasons of health.

Woxman has over 27 years of experience in the appliance industry. Until this appointment he was general manager of one of the major Canadian manufacturers of electrical appliances, it was pointed out.

DON'T BE SHY...

If you're not sure what valve to use, ask us—

Primore manufactures the largest selection of Air Conditioning and Refrigeration Valves in the industry. Yet, should you have a special problem where none will meet your needs, we invite you to discuss your problem with us. We will design, or alter, any valve to meet your requirements.

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Remember . . . we make all types of Valves for Compressors, Condensers, Receivers and Evaporators for Home, Business and Automotive Air Conditioning and Refrigeration.

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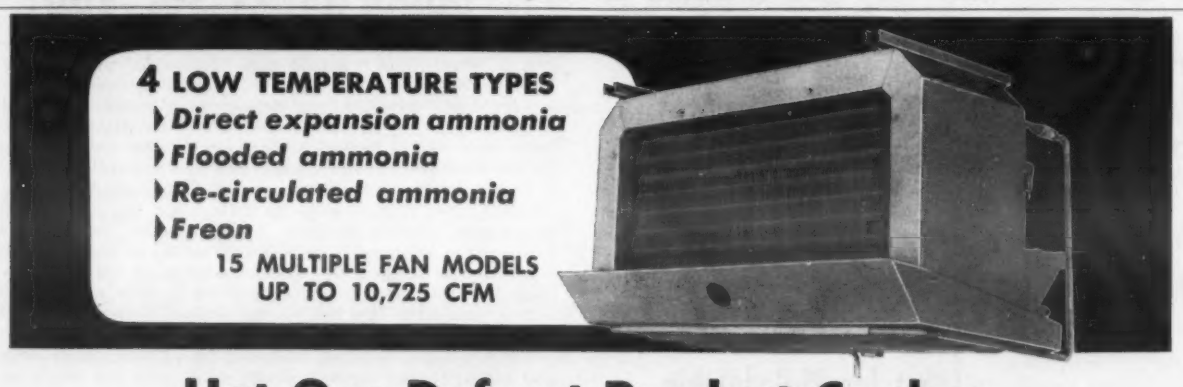

Hot Gas Defrost Product Coolers for AMMONIA and FREON SYSTEMS

Krack's *complete line of conservatively rated* hot gas defrost units makes it easier and more economical to select the correct size coolers for your refrigeration requirements. • Krack units conservatively rated . . . no fear of underestimating • More heat transfer surface/BTU • Adequately sized motors have thermal overload protection • Greater ratio of primary to secondary surface.

Better investigate now . . . see how much you can save with a Krack installation. Use the handy coupon below.

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Manufacturers of Freon, Recirculated, Flooded or Direct Expansion Ammonia Heat Transfer Equipment

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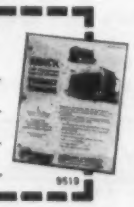

9519

4,000 Fittings Used In Chicago Exposition Center

CHICAGO—Twenty miles of piping and more than 4,000 welding fittings are used in construction of the heating and air conditioning system for Chicago's new exposition center, McCormick Place, scheduled for completion in mid-November.

The supplier of fittings for the giant system, Tube Turns Div. of Chemetron Corp., said the center required one of the biggest heating installations in the country. The four-story building is 1,180 ft long and 365 ft wide and has a volume of 36 million cubic feet.

The heating and air conditioning system cost over $1 million, and the annual fuel bill for the gas and oil used in the system is estimated at $62,320, Tube Turns reported. The system normally will use gas heat, but will require some 500,000 gals. of oil a year for heating when gas is not available.

Welding fittings from ¾ to 36-in. pipe sizes are used in the installation, designed to maintain comfortable air temperature in rooms varying in size from 30 by 60 ft to the giant main exhibit area, about the size of six football fields.

The $35 million center has a main theater seating more than 5,000, a recital hall, 23 meeting rooms, two restaurants and an art gallery, and the giant exhibit floor can be divided into three exhibition areas. It is on Chicago's lake front near Meigs Field, the city's downtown airport.

Distributor for the "Tube-Turn" fittings used in the job was the Fred C. Kramer Co., Chicago, and heating contractor for McCormick Place was The Dell Corp., Chicago.

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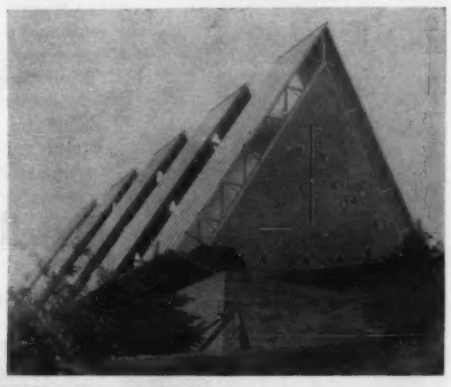
BY PASS VALVE

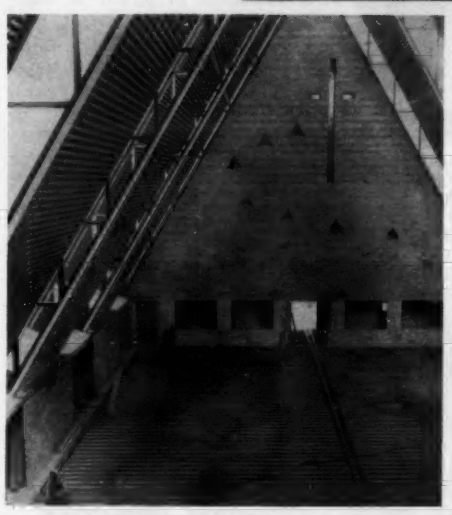
Simplifies installing fan-coil or induction type air conditioners. Only ¼ size of average valve cluster, it combines function of inlet-outlet valves and flushing valves. Available with ½" or ⅝" solder or flare connections.

CLAYTON MARK & COMPANY
1900 Dempster St.
Evanston, Ill., U.S.A.

Radiant Floor System In 77 Ft. High Church Concentrates Heat at Level of Worshippers



THE HIGH ceiling of St. Sebastian's church proved no heating problem because a floor-type 4-D wrought iron radiant heating system was installed. The alternately high and low bays of the roof provide two advantages: 1. A play of natural light on the interior, making possible light and open interior; 2. A natural ventilating area in ridges of high bays where remotely operated sashes control ventilation.



SPACED on 16-in. centers these 1-in. diameter laterals were welded to 2-in. diameter mains and then covered with 3 in. of concrete. More than 9,000 ft of corrosion resistant 4-D wrought iron pipe was installed in St. Sebastian church for radiant heating.

PITTSBURGH — One of the newest and most modern churches in the country — St. Sebastian church near Pittsburgh — will be heated by a wrought iron radiant heating system.

James R. Dodson, Jr., Pittsburgh mechanical engineer, designed the radiant heating system for the 77-ft. high church to operate when outdoor temperature is as low as 0° F.

Water will be heated to 100-140° F. by a boiler located in the basement at the sacristy end of the church. This water will circulate through the network of wrought iron pipe embedded in the main church floor, according to a report by A. M. Byers Co.

The floor is a concrete slab on grade. Heat will radiate to the surface where rays will be absorbed and converted to heat energy. The area over the pipe coils will convert to a mild heat source.

Its output of approximately 640,000 B.t.u. will represent 70% of required building heat, the report said. The additional 30% of spare heat will originate from a supplementary forced air heating system. Heat output is based on 140° F. maximum average water temperature and a radiant slab output of 60 B.t.u./sq. ft. As outdoor temperature increases, water temperature modulates downward.

D. E. Hickey Co., Pittsburgh heating contractor, installed the 11,000-sq. ft. radiant heating system. The combination grid and coil system was fabricated on the sub-slab, spaced on 16-in. centers and connected to 2-in. diameter mains. After being hydrostatically tested at 125 p.s.i. for 24 hours, the 4-D wrought iron pipes were covered with 4 in. of concrete.

In listing advantages of the radiant heating system installed at St. Sebastian church, the report said that "with an extremely high ceiling, the heating concentration can be directed at occupant level at a uniform temperature. The theory of radiation allows air temperature to be lower while personal comfort is maintained."

Also, the radiation theory "makes it possible to maintain lower temperature when the building is unoccupied," according to the report. "In addition, concentration of heating at occupant level means less building volume to be heated."

Another advantage cited: "Use of the radiant-heated slab with forced hot air enables the system to respond rapidly to changes in the number of occupants without override or lag."

4-D wrought iron pipe used for the church's radiant heating system was manufactured by the Byers company, Pittsburgh. The architectural firm was Gerard McDonald of Pittsburgh. M. W. Stuhldreher, architect-engineer, was associate in charge. General contractor was Mellon-Stuart Co., also of Pittsburgh.

Fred Crawford Dies, Past Pres. of DHACA

DETROIT — Fred Crawford, 68, owner of Home Comfort Heating Co., St. Clair Shores, died Oct. 26 at St. John's hospital.

He was a past president of the Detroit Heating & Air Conditioning Association.

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ROUND OAK Circulaire Furnaces Are Designed For Greater Comfort, Engineered For Bigger Profits!

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Gas-Fired Wall Heater Uses Thermoelectric Generator, Operates During Power Failures

ATLANTIC CITY, N. J. — A new home heating system which would operate normally during power failures—and could even provide a source of stand-by electrical power for such emergencies—could be the outgrowth of a device exhibited by Minnesota Mining & Mfg. Co. at the American Gas Association's "Festival of Flame" here, the company announced.

Highlight of the 3M display is a gas-fired wall heater which uses a thermoelectric generator—one of the remarkable new devices which converts heat energy to electrical energy without moving parts—to provide the electrical energy required to operate the fan circulating warm air throughout the room, the company said.

The thermoelectric generator draws its heat energy directly from the heater's combustion chamber.

Typical Operating Characteristics

Wall heater — standard make, converted to thermoelectric power in the 3M Electrical Products Laboratory.

Fuel energy input—30,000 Btuh.

Heat output—20,000 Btuh.

Cfm output—approximately 300-400.

Fan speed—1,100 rpm.

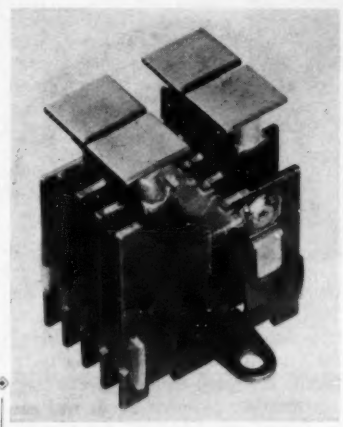
Thermoelectric generator output — 8 watts; 2.3 volts (closed circuit); 4.6 volts (open circuit).

Generator hot junction temperature—500°F.

Generator cold junction temperature—130°F.

Noise level in operation—silent.

GAS-FIRED wall heater uses a thermoelectric generator to power the air circulating fan and heating controls.



THERMOELECTRIC module at the heart of the 3M furnace generator prototype.

According to 3M, the unit demonstrates that with materials and know-how now available, similar thermoelectric generators could be built for any forced air or hot water central heating system — making such systems for the first time completely independent of outside power.

"When—and if—such heating systems become available to the public will depend on the willingness and ability of heating equipment manufacturers and heating fuel suppliers to work cooperatively in the considerable additional development work required to design equipment for mass production at competitive prices," 3M said.

"This 'proof of principle' device has been developed as a demonstration of the company's ability to furnish the gas appliance manufacturing industry with the thermoelectric materials and the technical proficiency necessary to make such a heating advance possible.

"Uninterrupted heating system operation during power failures—important as this may be—is but one of many advantages promised by the new type of system. These devices could easily be built to provide emergency power.

"The only cost to the purchaser would be the cost of the original equipment, as all of the heat converted by the generator into electrical power would be dissipated—as heat—within the home.

"Therefore there would be no increase in fuel costs. And there would be practically no maintenance costs since a thermoelectric generator has no moving parts.

"Since such a unit would eliminate the cost of electrical power which would otherwise be required, savings in operating costs over the useful life of the device would more than pay for installation, and maintenance if they were required.

"A thermoelectric system would provide very gradual start-up and shut-off of circulation, thus eliminating noise and sudden drafts and providing the ultimate of regulated comfort.

"Many space and wall heaters are now sold without fans to eliminate the expense of connecting the device to the house electrical system. With a 3M type unit, the consumer would enjoy the advantages of forced air circulation without the added expense of connecting the heater to a separate electrical source and without the added operating costs this involves."

The generator was designed and built by 3M for the Martin Co., which held a prime contract from the Atomic Energy Commission for the development of such a system. A number of commercial applications for thermoelectric devices have been developed at 3M.

REGIONAL MANAGER

We are looking for two regional managers between the ages of 25-35 for our Florida and Pennsylvania territories. If you are interested in working with a distributor to build sound dealer organization and if you can furnish a proven record of accomplishment, we are interested in you! You will work for a large corporation selling well-known and respected equipment in the commercial refrigeration field.

Write Box A6665, Air Conditioning, Heating & Refrigeration News

Battelle Memorial Institute Extends Thermoelectric Research for 2 Years

COLUMBUS, Ohio—The current research program at Battelle Memorial Institute on materials and techniques for thermoelectric - cooling devices will be extended for two years, effective Nov. 1, according to Dr. E. H. Lougher, who is coordinating the program at the research center here.

The extension proposed by Battelle, he said, has already received sufficient support from companies presently sponsoring the program to assure its continuation. A number of American and European industrial firms interested in research basic to the application of the Peltier cooling effect have been underwriting the program on a cooperative basis for the past two years.

PRINCIPAL OBJECTIVE

"The principal objective of the research has been and will continue to be the preparation of new compounds and the investigation of their resistivity, thermal conductivity, and thermoelectric power," it was pointed out. As announced at the inception of the program, emphasis is being placed on the thermoelectric properties of materials which have received relatively little attention for thermoelectric devices, as distinguished from materials, such as bismuth telluride, that have been heavily investigated.

"Complementing the major effort at Columbus, physicists in Battelle's Geneva (Switzerland) laboratories are engaged in a theoretical study of lattice thermal conductivity—a property of great importance in research on materials for thermoelectric applications. Although the program is primarily aimed at materials development, some device research of a basic nature is being conducted."

SUBSTANTIAL PROGRESS CITED

While not free to give details on the program to date, Dr. Lougher indicated that substantial progress has been made during the past two years.

"At least one compound," he reported, "has been found to have promise as a thermoelectric cooling material, although it is still too early to say whether materials based on this compound will be competitive with the better thermoelectric alloys now commercially available.

"Perhaps as important," said the Battelle scientist, "new theoretical techniques have been developed which aid immeasureably in screening and improving compounds and alloys. This theoretical approach has reduced greatly the amount of experimental work required to predict the maximum thermoelectric figure of merit attainable in a given material.

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Stop terminal leaks on all sealed units quickly and permanently.

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is the new popular Derco seal, part T-300B. Made of Delrin, the new duPont wonder material, the Derco seals are installed in the same manner as the Watsco Seals mentioned above — Each Derco Seal has its own electrical connector — The overall height is short enough to allow terminal cover replacement.Cannot short out — Fits almost every unit.

For additional information ask your wholesaler or send for our latest catalog. Dept. N-111.

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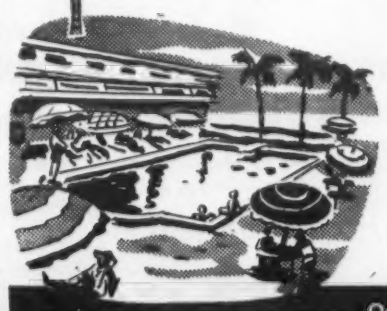

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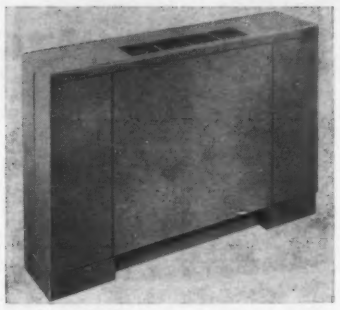


● Complete flexibility for adapting to a wide variety of installation requirements is said to be a feature of the newly-designed "Bohn-Aire" series of remote individual room air conditioners recently introduced by the Danville Div., Bohn Aluminum & Brass Corp., Dept. AH&RN, Danville, Ill.

The line features four room conditioners in five sizes each from 200 to 600 cfm and capable of providing individual room control of temperature and humidity in apartments, motels, hotels, offices, hospitals, or any other building with central hydronic cooling and heating systems, according to the division.

"Compactness in a slim 8½-in. width is provided in both the concealed models and attractive, durable cabinet styles," it was stated. "Cabinet models can be semi-recessed up to 3¾ in.

"Easily installed and serviced in either floor or ceiling mountings, all Bohn-Aire models have easily-accessible mounting brackets, piping and electrical lines, and air vents; they also have removable filters, and removable motor-fan assemblies."

Other features are three-speed pushbutton controls and many optional accessories including adjustable grilles, auxiliary drain pans, inlet plenums, and heavy gauge aluminum wall boxes.

Continuity Tester, Spotlight In Kit 313

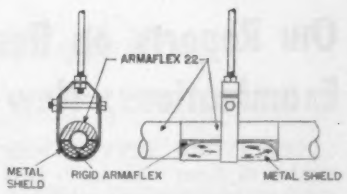
● Designated Kit No. 313, a multi-purpose continuity tester and spotlight in convenient belt carrying case is offered by Bright Star Industries, Dept. AH&RN, Clifton, N. J.

It checks wiring, controls, circuits, fuses, grounds, shorts, opens, broken wire, relays, switches, limits, burglar alarm systems, and fills many other purposes, according to the company.

Test leads use plug and clips for instant attachment. Tester works through a three-volt battery supply.

(*Not* a voltage tester, since voltage cannot be tested through a flashlight bulb, it was noted.)

Approximate retail price for the kit is $7.30. Continuity tester and spotlight may be had without carrying case at $6, list price; belt carrying case is available separately at $1.50, list price. (All prices approximate.)



Rigid Foamed Plastic Resists Compression

● A rigid foamed plastic material to be used as a load bearing insulation at pipe hanger locations, deeply buried underground lines, and other areas where pipe covering may be subject to compression set deformation has been developed by the Armstrong Cork Co. Insulation Div., Dept. AH&RN, Lancaster, Pa.

The new material, called "Rigid Armaflex," has physical properties similar to Armstrong "Armaflex 22," a flexible foamed plastic pipe covering, it is pointed out.

PREVENT SCALE
GIVE WATER
RUNNING ROOM

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When rust, scale, and other deposits build up on heat-exchange surfaces in your cooling system, efficiency drops.

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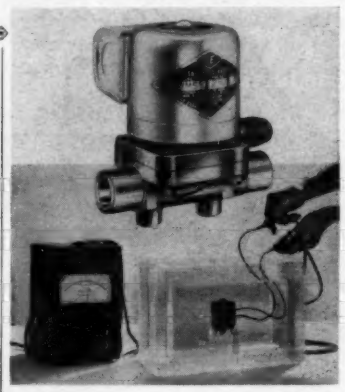


LINE TESTING at 2,300 volts of the epoxy-clad coils completely submerged in water is one of the quality control steps employed in the manufacture of solenoid valves by Jackes-Evans.

Epoxy Clad Coils on J-E Solenoid Valves

● Completely waterproof epoxy-clad coils, which are said to eliminate the most common cause of coil failure, have been made standard at no additional cost on all solenoid valves regularly cataloged by Jackes-Evans Mfg. Co., Dept. AH&RN, 4427 Geraldine Ave., St. Louis 15, Mo.

"These new coils are permanently, hermetically sealed in a specially compounded epoxy-resin by a vacuum molding process which makes them impervious to almost anything and everything," the company said. "This eliminates any possibility of coil failures or burnouts due to condensation, frost, oil, gasoline, fluid spray, and many other corrosive liquids, gases, and vapors.

"The widest application, undoubtedly, will be wherever moisture or condensation is involved. Probably the most common application will be in fan coil units.

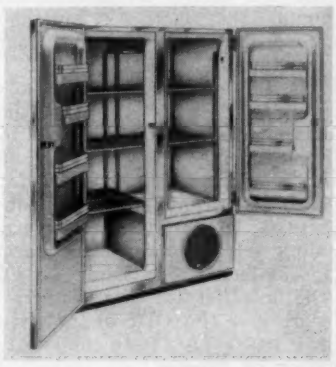
"Since these coils are completely weather-resistant and unaffected by extremes of hot and cold, as well as moisture, they open the way for many other applications of solenoid valves such as in water towers, condensing units, etc."

Stainless Reach-In Has Door Shelves

● A new stainless steel reach-in refrigerator featuring storage shelves in the door has been announced by Silver Refrigeration Mfg. Corp., Dept. AH&RN, 1469 Utica Ave., Brooklyn 34, N. Y.

The door shelves add 3 extra cubic feet of storage space per door and can be used for storing bottled goods, milk containers, eggs, dairy products, and small canned goods, it was pointed out. The door pans are constructed of one-piece die-stamped aluminum and anodized in pastel green.

The newly-designed ceiling blower coil is only 3½ in. high, the company stressed. Tray slides and shelves are adjustable and interchangeable without using any tools. They may be used separately or in combination at the same time.



"This model previously had a 40-cu ft storage capacity, but now, with Silco's new features, the same refrigerator becomes a 48-cu ft capacity unit," it was stated.

Humidifier Installs In Return Air Duct

● A newly-designed humidifier to be installed in the return duct of the heating system, has been announced by Skuttle Mfg. Co., Dept. AH&RN, Milford, Mich.

The model 70 return air humidifier is a centrifugal atomizing unit and discharges a very fine vapor into the dry air. Installation is claimed to be simple; it is wired in parallel with the blower motor and in series with the fan switch.

Model 70 has a daily capacity of 4 gals of water, and will adequately humidify any average small home without wetting any part of the heating system, according to the company. Made of corrosion resistant stainless steel and aluminum, this new unit is shipped complete with installation instructions and template, and all necessary equipment for immediate installation and operation, the company said.

14-Day Time Switch Lets Equipment Rest

● A new 14-day time switch, announced by Tork Time Controls, Inc., Dept. AH&RN, Mount Vernon, N. Y., "works" but once a week. It is used to turn a motor on one week and off the next, and is designed specifically to allow pumps, motors, or other equipment to "rest."

Called the model 14D1197 and listing for $39.95, the switch is a single-pole double-throw time switch. "Its dial makes a complete revolution in 14 days, as compared with 24 hours for a standard time switch," the company noted. "Every seven days, the unit 'make-breaks' to put one set of equipment on and the other off. This provides the full week of rest."

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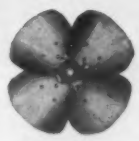

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OHI Reports on Results of Certification Examinations; New Jersey Scores Best

NEW YORK CITY — With grades in from over 1,000 OHI service certification examinations taken in 20 different areas of the United States, the Oil Heat Institute of America has published its first comprehensive analysis of the results of these exams.

The 1,000-plus servicemen taking the certification examinations represent employment from between 200 and 300 heating oil distributing companies.

Examinations are of two types. One, the Silver Certification Examination, covers the high pressure gun-type burner and controls, as well as general subjects relating to service; the other, the Gold Certification Examination, includes low pressure and vertical rotary burners and controls as well as related service subjects.

The OHI analysis given below relates only to the Silver Certification Examination.

Four regions of the country are included in the analysis: New England, the South, the Midwest, and the Middle Atlantic States.

New England ranked highest of the four areas with 81% of the servicemen taking the examination attaining a passing grade, entitling them to silver certification as oil heating technicians.

The Middle Atlantic area was second with 79.6% achieving a passing grade on the examination. The Midwest and South followed in that order with percentages of 75% and 49.2%, respectively.

The Oil Heat Institute pointed out that the analysis discloses that in those areas where there is a long history of the heating oil dealer integrating his operation to include the installation, sale, and service of equipment, there is a higher percentage of service mechanics passing the examinations.

New Jersey rated highest of all the individual states where examinations were held, with 95% of all mechanics taking the test attaining a passing grade.

Local groups may apply for the OHI service certification examinations, whether or not they are members of the Oil Heat Institute of America.

A list of the names of mechanics desiring to take the examination, with the names of their company affiliations, and a check covering the $2 fee for each registrant, should be submitted to OHI headquarters, along with the requested date.

The local group should set up the location for the examination, and the OHI of America will pay a $20 fee to the supervisor or proctor.

TECH CENTER

by Frank J. Versagi, Technical Editor

Architects—Engineers—Contractors

Recently the NEWS sat in on a rambling discussion between an architect, an engineer, and a contractor. From all that was said, the following material is of greatest general interest.

"Architects are not trained and geared to these fast moving times. In great measure, they have lost control of their function."

Spoken by one of the country's leading architects, these words are not so much criticism as a realistic evaluation of the present status of architects, this source explains.

Apparently a major source of difficulty is related to the simple fact that detailed checking of working drawings is no longer done in the architect's office.

"Errors originating because of this loose workmanship are compounded in the engineer's office. Anything else left to do wrong is then taken care of by the contractor."

The claim is that the architect simply does not have time, or is not given sufficient time, to produce proper documents. It is not uncommon for architect drawings to omit details on, say, location of pipes and risers—a situation unheard of years ago. Add to this the complexity of modern buildings, and the fact that there are usually "500 options and alternates allowed," and you begin to see some of the reason for the changing role of the architect.

Depression years depleted the supply of architects, and in the opinion of many, the teaching and supplying of good architects have never been restored.

The war with its shoddy, cheap work and its acceptance of all sorts of substitutes, created conditions which are now accepted as normal.

"If we can't be allowed to produce good documents, we have no choice but to produce inferior buildings and train the owner to put up with certain problems," offers the architect.

* * *

As the architect's role has been reduced, the engineering function has expanded—especially in the last few years. But there is evidence that engineers are not properly trained either. At one time, the engineer was the coordinator on the job; he checked and furnished drawings; his work was such that the subcontractor and the architect never had direct contact. Today it is not unusual for architects to be flooded with incomplete drawings directly from the subcontractors.

Because of the rush, because both architects and engineers have forgotten how to detail, they pick out the same items time after time. The result is the increasing number of already stereotyped modern buildings.

* * *

It is unrealistic to expect the contractor to make up for mistakes made up the line.

"The failure of professional men to keep up with costs of materials, with the cost of labor, with jurisdictional disputes causes them to write idiotic specifications." From the contractor's viewpoint, liaison between themselves and the architects is a desirable thing.

Take the matter of air conditioning. Some architects insist on specifying both equipment and performance. It is impossible for the contractor to guarantee both. The specifications should call either for "a 60-hp unit, 6-row coils, etc." or for a certain cooling capacity at design conditions.

A couple of parting shots:

"Why does the architect insist on calling for a 5-in. pipe in a 2-in. wall?"

"Why does the engineer insist that the only appropriate place for a thermostat is in the center of a beautiful mural?"

About the only thing on which the three spokesmen agreed is that courts are issuing more and more judgments based on errors and omissions and on product defect, making errors and omissions insurance a must.

Applied Electrical Theory

The popular 21-week Tech Center series on basic electricity has been reprinted and is available in a 40-page, 8½ by 11 format. Prices: 1-9 copies, 75¢ each; 10-24, 65¢; 25-49, 55¢; 50 or more, 50¢.

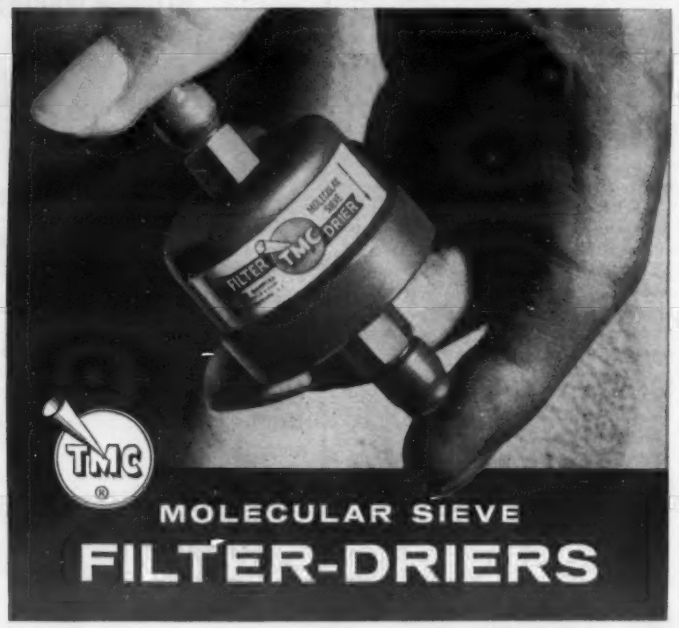
Westinghouse Plans Massive Service Training Program

MANSFIELD, Ohio — Plans for a massive service training program for some 18,000 dealer and independent servicemen were announced here recently by Westinghouse Electric Corp.

A series of nine three-day regional service clinics will cover all of the new 1961 major appliances, including room air conditioners, with all distributor management and service personnel.

W. B. Creech, manager of Westinghouse Product Service, said training of dealer and independent servicemen will follow completion of the distributor clinics.

The schedule for the regional meetings with distributors is as follows: Atlanta, Nov. 16, 17, and 18; St. Louis, Nov. 9, 10, and 11; Dallas, Nov. 14, 15, and 16; Columbus, Ohio, Oct. 31 and Nov. 1 and 2; Philadelphia, Nov. 7, 8, and 9; New York City, Nov. 14, 15, and 16; Chicago, Nov. 2, 3, and 4; Seattle, Nov. 7, 8, and 9; and Los Angeles, Nov. 14, 15, and 16.



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SAVE ALL ALONG THE LINE

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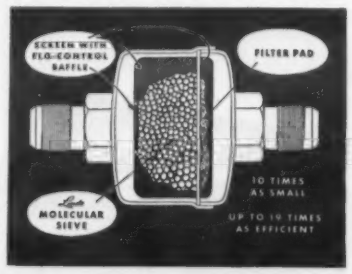

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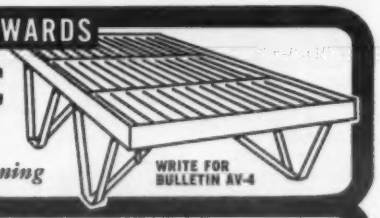
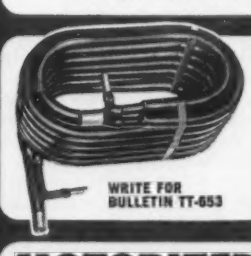


WRITE FOR BULLETIN AV-4



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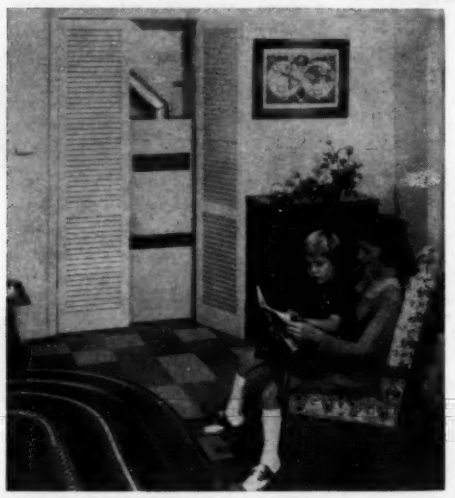
For chilled water cooling systems and for heating systems . . . 100% positive shut-off . . . Compact . . . Low cost . . . Low Voltage . . . No current draw when open.

WRITE FOR BULLETIN MV-1

EDWARDS ENGINEERING CORP.
938-9 Alexander Ave., Pompton Plains, N. J.
TEmple 5-2808

"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel-Fin Radiation, Motorized Valves, Air and Water-Cooled Refrigerant Condensers."

A FIVE-ROOM collection of new "ideas for living," featuring this all-electric Frigidaire kitchen, is a highlight of GM's 1961 Motorama. The kitchen has such ideas as an "about-face" pantry that pivots out of the wall, and storage shelves that move up and down electrically. In foreground is desk with intercom, hands-free telephone, recipe file and vanity. Same island includes built-in lazy-Susan tray, chopping block, and sink with soap and hand lotion dispensers. Pedestal-mounted Flair range with ovens is at left, rear. Frost-Proof refrigerator and food freezer and mobile charcoal grill are along right wall.



LOUVERED French doors are opened to show the closet installation of a GM Delco 365 Conditionair. This complete home conditioning unit provides heating and cooling comfort 365 days of the year.

Delco 'Home Conditioner'--

(Continued from Page 1, Col. 3)

tem which will do just that. We are happy that we can offer a product such as the Delco year-round 'Home Conditionair' which you saw in the Ideas home. And, because it is priced within easy reach, we expect to sell a lot of them."

The GM-Delco "Conditionair" line of year-round residential air conditioning systems is now available in a wide range of styles and sizes, declared Paul H. Rutherford, general manager of the Delco Appliance Div. The basic series in the "365 Conditionair" line consists of a gas-fired furnace of the upflow type, finished for installation in living quarters and designed for small space installation, with a cooling coil unit mounted on top of it, connected to a remotely installed condensing unit. Also in the line are horizontal models for crawl space or low attic area installations, packaged attic-type air conditioning units and compact indoor coil and blower units for installation with remote condensing units, and self-contained heat pumps.

Other heating units in the "Conditionair" line are available in gas-fired models, and in counterflow type furnaces.

In a question period following Dezendorf's talk, some interest seemed to center on the cost of completely air conditioning a home. In replying to the questions, Rutherford said:

"Generally, the average six-room existing house with a good warm-air heating system can be completely air conditioned for slightly more than $1,000. On the other hand, the installed cost for complete air conditioning during construction of a $15,000 to $20,000 home might be as low as $850. Since this would increase mortgage payments by approximately $7 per month, the cost of installing central air conditioning with a new heating system easily falls within the budget of the average homeowner."

In his talk to the press, Dezendorf came out swinging against the current critics who cry that there is much "waste" of our resources and other elements in the continued improvement of the products purchased by the American consumer.

'Using Old Equipment Is Real Waste'

"Since some of our critics are so severely at odds with us in this area, I'd like to say right here that there is probably no better example of 'real waste' than the time spent using the antiquated equipment they seem to advocate," said Dezendorf.

"If father can afford electric coils under his driveway, is it waste to install them? Or is it more constructive and less wasteful for him to spend his time shoveling snow and perhaps have a heart attack?

"When a modern mother has time to help her children with their homework should she feel guilty because she doesn't have to scrape and wash the dishes, defrost the freezer, and take out the garbage?

"Should we really regret the passing of the so-called 'good old days'? Were we wrong not to apologize years ago for conveniences like central heating, plumbing, and electricity?

We Should Apologize for Not Taking Advantage Of Technical Progress

"Quite the contrary! It seems to me that we should, instead, feel apologetic for not taking the greatest possible advantage of all our technological progress, for not freeing ourselves even more than we have from all the primitive, tedious drudgery and discomfort which waste the most valuable possession we have—time."

U.S. industry is producing better appliances and other home equipment that continues to free homeowners and housewives in particular from the drudgery of menial tasks, and has built into such products greater style and quality, yet currently the American consumer is not buying such products at a rate consistent with the general spending pattern, the GM official pointed out.

"We have communicated less effectively than we think we should have," Dezendorf commented. "Just how bad are our communications? Well, we and our industry apparently have failed to convince 94% of this country's homeowners that an electric dishwasher is a worthwhile investment. Ninety percent of our homeowners are without summer air conditioners, and 92% do not have waste disposers.

"Admittedly, there are many people who cannot afford these appliances, but on the other hand, more than 700,000 Americans apparently could afford to go to Europe last year. I mention this not to imply a value comparison between travel and home appliances, but merely to illustrate the point that our problem is far from being purely an economic one."

Long Island--

(Continued from Page 1, Col. 4)

will range in price from $21,500 to $24,000. The price will include gas-fired warm air heating systems and Fedders central air conditioning.

It is the first development in which warm air heating and air conditioning systems will be installed in compliance with the rigid code of standards of Long Island's Climate Control Council, according to Joseph Frederick, president of Sheet Metal Workers Union Local #55 and chief labor member of the council.

Frederick praised the Osias Organization for its "progressive approach" to home-building on Long Island, and said he shared Osias's belief that home-buyers want central air conditioning.

"In many cases," Frederick said, "new home-buyers come from modern apartments which are fully air conditioned. They want the same comfort in their homes."

Kermit Feldman, vice president of United Combustion and Air Conditioning Corp., the installing contractor, will be in charge of installation of warm air heating and air conditioning at the development, which is to be known as "Village On The Hill."

Feldman said the Osias development was a "major breakthrough" for warm air heating and air conditioning in the one-family home market on Long Island. He agreed with Osias that home-buyers want air conditioning.

"The demand for installing air conditioning in existing homes which lacked it," Feldman said, "has become so great that our company has been obliged to open a separate home improvement department."

Osias said the two-story Colonial house will have nine rooms and will be known as the "Manor House." The exterior will be of brick and natural wood-shake handsplit shingles. There will be four bedrooms, two and one-half baths, living room, dining room, kitchen, dinette, large family room, foyer and vestibule, a full basement, and two-car garage.

The "Regency Ranch" will have four bedrooms, two and one-half baths, living room, family room, dining room, kitchen, dinette, utility room, laundry room, den or fifth bedroom, storage closet, and two-car garage.

Osias said that cost economies effected were enabling him to include central air conditioning in the homes for only a few hundred dollars more than they would cost to build without it.

Florida Heat Pumps--

(Continued from Page 1, Col. 3)

Owens-Corning Fiberglas insulation, and General Electric kitchens. Houses are all-electric. Some will have swimming pools.

The fact that all homes are equipped with air conditioning as part of the quoted price is stressed strongly in Imperial Point publicity.

Haft-Gaines is also installing Weathertrons at its Royal Camino Park subdivision in Boca Raton, Fla.

Welbilt--

(Continued from Page 1, Col. 2)

dealers and distributors through carefully selected representatives, with strong factory backing, and assistance," Craig said.

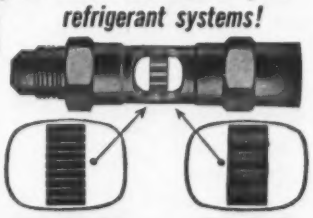
Welbilt's new sales approach will not affect the company's long-standing policy of limiting the number of its franchises, he added, "which assures each franchise-holder an equitable share of the nation's total market potential."

Craig pointed out that "protection" for distributors also eliminates competition with the home office for sales. If the home office does consummate a sale, he said, the distributor in that area receives both credit and commission for it.

Welbilt's distributors and their customers will receive the benefits of the firm's technical service program.

Simplest, most economical way to detect moisture in your refrigerant systems!

Positive Sealing LIQUID EYE® INDICATOR featuring the built-in MOISTURE-REACTOR



IT'S GOOD

The MOISTURE-REACTOR is composed of alternate, permanent and changing (Reactor) color bars. When all the bars appear the same color (green)—it's good—there's no moisture in system.

IT'S BAD

If moisture enters the system, every other color bar changes from green to yellow—then it's bad—the dehydrator should be replaced. When the system is moisture-free again, the Reactor color bars will change back to their original solid green color.

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Linde UNION CARBIDE

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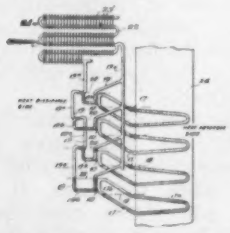
PATENTS

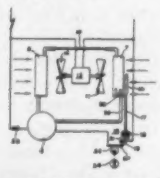
Week of Aug. 2

2,947,150. REFRIGERATING APPARATUS HAVING IMPROVED HEAT TRANSFERRING MEANS. John Roeder, Jr., Benton Harbor, Mich., assignor to Whirlpool Corp., a corporation of Delaware.



10. A thermocouple device, comprising: a substantially fluid impervious block of thermal and electrical insulating material having a pair of opposite side surfaces; at least one pair of dissimilar thermoelectric elements in said block having their opposite ends oriented toward said side surfaces; electrical conducting metal members at said opposite side surfaces connecting said elements in electrical series to provide a cold junction at one of said side surfaces and a hot junction at the other when said series is subjected to a direct current. . . .

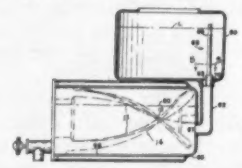
2,947,153. COMBINED THERMOSTAT AND DEFROST CONTROL FOR AIR CONDITIONING APPARATUS. Leonard W. Atchison, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



1. An air conditioning apparatus for cooling the air within an enclosure comprising a refrigeration system including an evaporator, a compressor and a condenser connected in refrigerant flow relationship, means for continuously circulating a stream of air from within said enclosure through said evaporator and back into said enclosure, means for operating said system to cool said evaporator below the freezing point of water whereby frost tends to collect on the surface of said evaporator. . . .

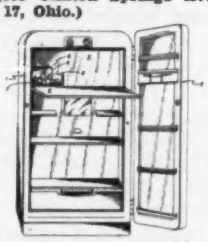
2,947,155. AUTOMATIC FEED FOR ICE CREAM AND THE LIKE FREEZERS. Louis A. M. Phelan, Rockton, Ill.

1. A continuous, automatic gravity feed freezer for ice cream and the like, including a horizontally disposed, refrigerated cylinder having an outer front cover with a serving valve adjacent the bottom thereof and also having a rear end wall, a conveyor unit journaled for rotation with-



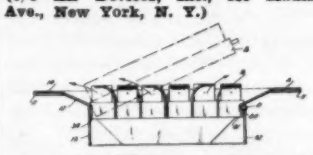
in said cylinder for moving the contents of said cylinder toward said front cover and into a mass inclined generally downwardly from front to rear. . . .

2,947,156. AUTOMATIC ICE MAKER. Henry Edward Roedter, Hamilton, Ohio. (538 Clinton Springs Ave., Cincinnati 17, Ohio.)



6. In combination, a mold defining a mold cavity in its upper portion, a piston assembly directly beneath said mold cavity the upper face of which defines at least in part the bottom wall of the mold cavity, said piston assembly comprising an outer piston and an inner piston, means for supplying fluid under pressure beneath said pistons to extend them into the mold cavity, means for differentially limiting movement of said pistons upwardly into the mold cavity, and means for retracting the pistons out of the mold cavity.

2,947,237. AIR DIFFUSERS. Cortland N. O'Day, Port Washington, N. Y. (c/o Air Devices, Inc., 185 Madison Ave., New York, N. Y.)

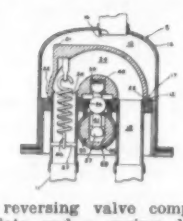


1. An air diffuser comprising a flush rectangular frame to be positioned against the periphery of an opening in a wall or ceiling having a flange positioned flush with said wall or ceiling to which opening an air conduit leads, a transverse rectangular cross section neck portion connected within the wall or ceiling to said air conduit extending into the wall or ceiling from the frame, obliquely positioned side walls connecting said frame and said neck portion and forming a well. . . .

2,947,238. AIR DISTRIBUTING OUTLET. Cortland N. O'Day, Port Washington, N. Y. (c/o Air Devices, Inc., 185 Madison Ave., New York, N. Y.)

1. An air distributor for mounting on a wall or the like, comprising a rectangular frame having a rectangular opening therein and peripheral flanges, a gasket carried within said flanges for sealing said frame against said wall, means forming a throat for the entrance of air to the frame opening, a bevel connecting said throat to said frame opening, parallel vanes mounted in said frame within said throat. . . .

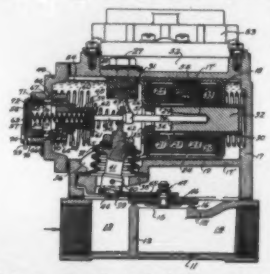
2,947,394. REVERSING VALVE FOR REVERSIBLE REFRIGERATING SYSTEM. Kenneth K. Cooper, North Caldwell, N. J., and Donald W. Lynch, Louisville, Ky., assignors to General Electric Co., a corporation of New York.



1. A reversing valve comprising a valve plate and a casing defining a gas tight housing, said valve plate including a surface within said housing forming a valve seat, said casing having a high pressure inlet port, said valve seat having a plurality of ports opening into said housing and including a low pressure outlet port and two additional ports spaced equidistant from said low pressure port, a valve member having a valve passage communicating at one end with said low pressure outlet port, the other end of said valve member being slidably supported on said valve seat. . . .

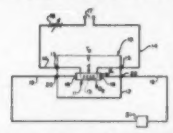
2,947,510. SOLENOID OPERATED GAS VALVE WITH SOLENOID RETARDING MEANS. William A. Ray, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif.

1. In a solenoid operated valve, said valve having closure means movable



between closed and fully open positions; solenoid means directly connected to said closure means for movement of the same between said closed and open positions, said solenoid means including: a movable part; retarding means operated by said part for retarding said movement of said closure means to fully open position when said solenoid means is energized. . . .

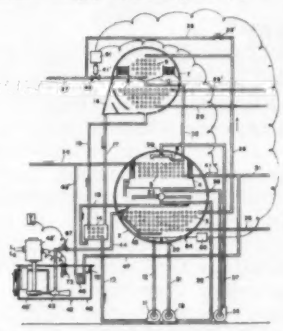
2,947,844. POSITIVE TEMPERATURE COEFFICIENT SEMICONDUCTOR DEVICE. Dennis H. Howling, West Orange, N. J., assignor to McGraw-Edison Co., Elgin, Ill.



In combination, a hermetically sealed container, a body of a semiconductive material having a negative temperature coefficient of resistance mounted in said container in spaced relation to the walls thereof, a gaseous medium in said container of a pressure where at the mean free length of path of the gas molecules is at least of the order of the minimum distance of spacing of said semiconductor body from said container. . . .

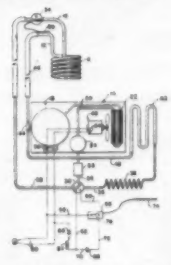
Week of Aug. 9

2,948,124. ABSORPTION REFRIGERATING SYSTEMS. Joseph E. Emmbury, Sr., Memphis, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



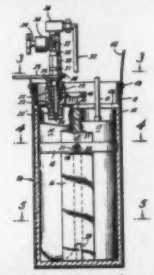
6. In a method of operation of an absorption refrigeration system, the steps which consist in supplying weak solution from the absorber to the generator, supplying strong solution from the generator to the absorber, heating solution from the generator to concentrate the solution, vapor so formed passing to the condenser, passing cooling medium through the condenser to condense vapor therein, condensate so formed returning to the evaporator, passing medium to be cooled through the evaporator in heat exchange relation with refrigerant therein. . . .

2,948,125. SCIENTIFIC APPLIANCE TEMPERATURE CONTROL ARRANGEMENT. Joseph A. Lawler, Chicago Heights, Ill., assignor to Blue M Electric Co., Blue Island, Ill.



1. In a scientific appliance for close tolerance lower range temperature control, a control temperature chamber, a primary evaporating coil in said chamber, a secondary evaporating coil outside said chamber, a refrigerant compressor having an intake port and an output port, a condenser operatively connected to the output port, a fan adjacent the condenser and arranged to bathe the latter in ambient air, a two-way valve arranged to receive refrigerant from the condenser, a first line from the valve to the intake side of the primary coil. . . .

2,948,127. PORTABLE REFRIGERATION SYSTEM FOR REFRIGERATING SCINTILLATION DETECTORS AND THE LIKE. William H. Carter, Jr., c/o Electro-Mechanical Development Co., 2337 Bissonet, Houston, Tex.



1. The combination of a refrigerant container, a device to be cooled as a scintillation detector, a thermal conductive block of rigidly therebetween positioning said container and said device in parallel spaced apart relation with axes in parallel, spaced apart, vertically coextensive diametral planes, an insulator surrounding said container, block, and device, and a housing surrounding said insulator, said container having a refrigerant therein in solidified state. . . .

2,948,210. AIR MIXING AND DISTRIBUTING UNITS. John P. Conlan, 570 W. 156th St., New York, N. Y.

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1 - 250 ton Carrier - Westinghouse motor 250 h.p. d.c. complete system, controls pumps, compressor integrally mounted over receiver and cooler. Excellent condition completely factory rebuilt 1958—used 1 season. 1 - 200 ton Carrier (same as above). Export inquiries invited. COMMERCIAL CONTROLS, 1463 Crotona Place, Box 56, New York City.

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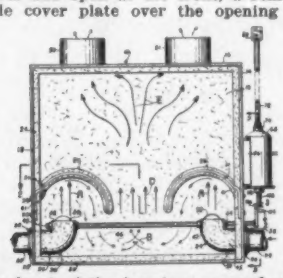
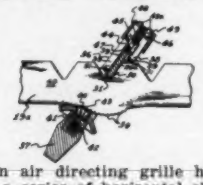
apparatus, comprising a rectangular housing having a back wall and side walls and open at the front, a removable cover plate over the opening in



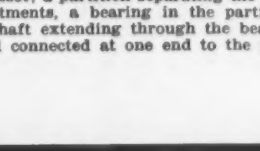
the front of the housing, opposed side walls having opposed openings at one end of the housing, air inlet pipes in said openings, one of the side walls connecting said opposed side walls having outlet openings therein, outlet pipes fitted in said outlet openings. . . .

2,948,211. LOUVER CONTROL FOR AIR CONDITIONING GRILLE. Oscar C. Melgaard, Phoenix, Ariz., assignor to Wright Mfg. Co., Phoenix, Ariz.



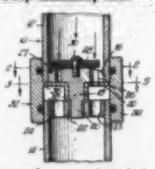
1. An air directing grille having a frame, a series of horizontal slats tiltably mounted on said frame to rock about horizontal axes, a series of vertical slats tiltably mounted on said frame to rock about a vertical axis, means on said horizontal slats connecting the same to tilt in unison, means on said vertical slats connecting the same to tilt in unison, and a control device formed with a pair of right angularly disposed slots. . . .

2,948,293. CAPACITY CONTROL FOR COMPRESSORS. Karl M. Gerteis, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



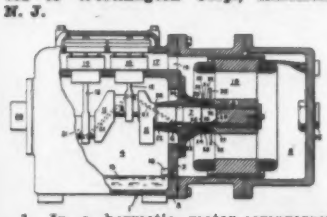
Regulating valve mechanism for controlling fluid flow comprising a casing including means forming a passageway having an inlet and an outlet for the passage of fluid through said casing, said casing including a cylinder having a section interposed between said inlet and said outlet so as to form a portion of the first passageway, means forming a second passageway communicating with the first passageway, condition responsive control means regulating flow through said second passageway thereby varying the flow characteristics of the fluid flowing through said first passageway outlet. . . .

2,948,296. VARIABLE CONSTANT FLOW DEVICE. David H. Thorburn, Oak Park, Ill., assignor to The Powers Regulator Co., Skokie, Ill.



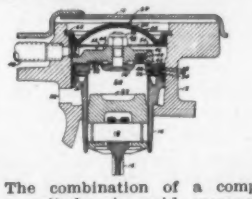
1. A valve for maintaining a constant rate of flow of a fluid regardless of wide variations in the pressure of the fluid comprising a casing, a valve seat in said casing, said valve seat having a plurality of orifices, means for selectively opening at least one of said orifices to vary the capacity of said valve, and a resilient disk mounted on the upstream side of said valve seat, said resilient disk radially overlying said orifices and normally being resiliently spaced from said orifices. . . .

2,948,458. HERMETIC MOTOR-COMPRESSOR UNIT. Andrew J. Nicholas, Suffield, Conn., and Henri Soumeral, Springfield, Mass., assignors to Worthington Corp., Harrison, N. J.



1. In a hermetic motor-compressor unit in which the motor has a rotor and the compressor has pistons, the combination of a crankcase compartment, a motor compartment through which suction gas passes to the compressor, a partition separating the compartments, a bearing in the partition, a shaft extending through the bearing and connected at one end to the rotor of the motor and at the other end to the pistons of the compressor. . . .

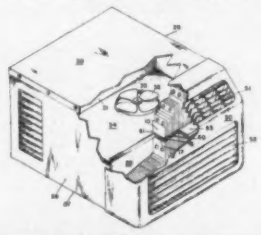
2,948,461. RECIPROCATING COMPRESSOR. Arne Frank, La Crosse, Wis., assignor to The Trane Co., La Crosse, Wis.



1. The combination of a compressor, a cylinder in said compressor, said cylinder having a compression chamber and a discharge chamber, a spring loaded suction valve operably associated with said compression chamber to admit gaseous fluid to said compression chamber, suction valve plate means secured above said spring loaded suction valve to bias said valve to the closed position, a spring loaded discharge valve located between said compression and discharge chambers, a discharge valve cage means secured above said spring loaded discharge valve to bias said discharge valve to the closed position. . . .

2,948,515. HEAT TRANSFER DEVICE. John Richard Mehalick, Fayetteville, and Edward R. Izzo, De Witt, N. Y., assignors to Carrier Corp., Syracuse, N. Y.

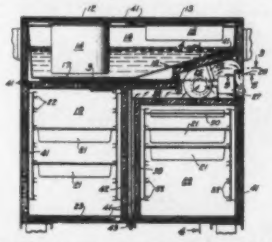
In an air conditioning unit including a housing having opposed side



walls, an end wall and a cover forming a chamber having an open end; a fan mounted within said chamber; means dividing the chamber into a fan inlet section and a fan discharge section, said means including a coil engaging edge; a heat transfer coil mounted in the open end of said housing; a first group of extended surface elements angularly arranged with respect to the coil, having a portion. . . .

2,948,798. MOBILE HOT AND COLD FOOD CART. William H. C. Ness, Los Angeles, Calif., assignor to National Cornice Works, Los Angeles.

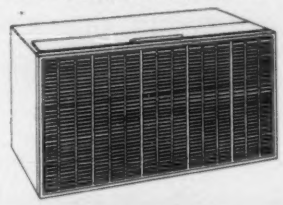
A hot and cold food cart having a hot food compartment and a cold food compartment disposed side by side, an electrically operated heating member disposed beneath said hot food compartment, an electrically operated fan disposed above said cold food compartment, an electrical control box disposed between said fan and one side of said cart, a side air passage extending across the entire side of



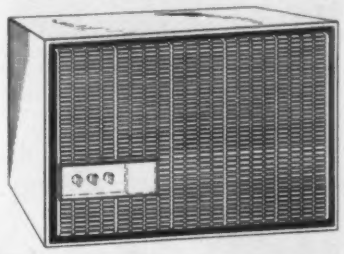
said cold food compartment which is adjacent to said hot food compartment, a back air passage extending across the entire back of said cold food compartment. . . .

DESIGNS

188,568. ROOM AIR CONDITIONER. Robert W. Hlee, Louisville, Ky., assignor to General Electric Co.



188,569. ROOM AIR CONDITIONER. Robert W. Hlee, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



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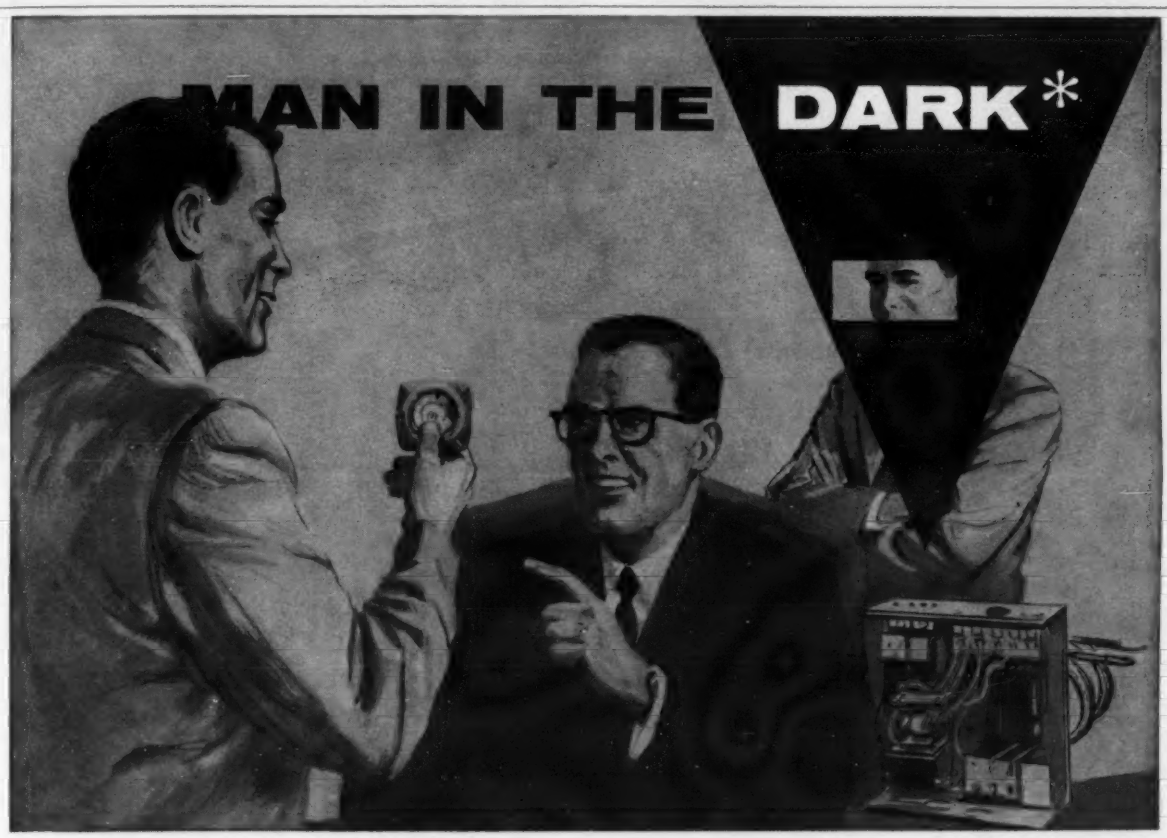

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Reaching these MARKETS	Serving these FIELDS
• Air Conditioning	• Residential
• Heating	• Commercial
• Refrigeration	• Industrial

SUPER-SON-R remote control allows control of Admiral room air conditioner from chair or bed.

ADMIRAL ROOM UNIT DATA

Model No.	Rating	Btu	Current Requirements
Ruler Series			
401AC7	1 hp	7,000	110/115 V — 7½ amps.
441AC7	1 hp	7,000	110/115 V — 7½ amps.
441AC12	1 hp	8,200	110/115 V — 11½ amps.
Coronet Series			
501AC12	1 hp	9,500	115 V — 12 amps.
501AC238	1 hp	10,000	208/230 V — 8 amps.
Royal Series			
801AC23	1 hp	12,000	230 V — 9.8 amps.
901AC23	2 hp	18,000	230 V — 12 amps.
991AC23	2 hp	18,000	230 V — 12 amps.
Super Son-R			
991AC23SR	2 hp	18,000	230 V — 12 amps.

* * *

Admiral--

(Continued from Page 1, Col. 1)

20-cu ft, side-by-side refrigerator-freezer in a single cabinet and three upright combinations that never require defrosting in the refrigerator or freezer compartments.

Three chest freezers and five upright models, two of which never have to be defrosted, also are among Admiral's 1961 products.

The company's new appliance lines represent an investment of $8 million for new tooling over the past four years, it was stated.

Remote Control Room Unit Available In 2-hp Model

The Admiral remote control air conditioner is produced in a 2-hp model with an announced cooling capacity of 18,000 Btu.

"It can be installed out of reach in a wall and never has to be touched," the company spokesman said. "From the comfort of an easy chair or from bed, one can turn the air conditioner on and off, select high, medium, or low fan speed, and the following comfort controls: fan only, cool, cool vent, and vent only. The unit features on-off lights and four indicator lights to show the comfort control in use."

The spokesman said the new wireless remote control room cooler can be extremely useful in hospitals and to bed-ridden persons at home. It is also practical for transom installation in hotels or small business establishments, he added.

Other Models Described

Highlighting the compact "Ruler" series of 1-hp room air conditioners is an improved accordion-type "Flex - O - Mount" that "expands" on both sides to permit instantaneous installation without tools and eliminate air leakage," according to Admiral. "It will fit windows up to 40 in. wide. The slim unit measures less than a foot deep.

Admiral's Coronet series has two 1-hp models with a cooling capacity of 9,500 and 10,000 Btu for use in large rooms. The more powerful Royal series offers one 1-hp model with a capacity of 12,000 Btu and two 2-hp models with a capacity of 18,000 Btu and capable of cooling a small ranch type house.

"All Admiral 1961 room air conditioners have an automatic thermostat to maintain room temperature at the desired level, germicidally treated polysponge filter which can be rinsed clean with warm water and never needs replacement, and a 360-degree adjustable air flow louver.

"New high density Fiberglas insulation similar to that used in refrigerators and freezers has been introduced to assure quiet operation and prevent heat infiltration. All cabinets are weatherproofed with two coats of rust and chip-resistant enamel. A 5-year protection policy is offered with all models.

Ranco Research Center Open House Nov. 20

POMPANO BEACH, Fla. — Open house will be held at the Ranco Research Center in Pompano Beach, Fla. from 10 a.m. to 2 p.m. Sunday, Nov. 20, for all who are attending the meeting of the Air-Conditioning & Refrigeration Institute in Hollywood Beach, Fla., Nov. 18-22, announces Jim Manecke, general sales manager, Ranco, Inc.

A special chartered bus will leave the Hollywood Beach hotel at 10:30 a.m. Sunday and will leave the Research Center on the return trip at 1 p.m. For those driving their own autos, it is about a 45-min. trip, Manecke said.

The Research Center was put into operation a couple of years ago to test control applications of all types.

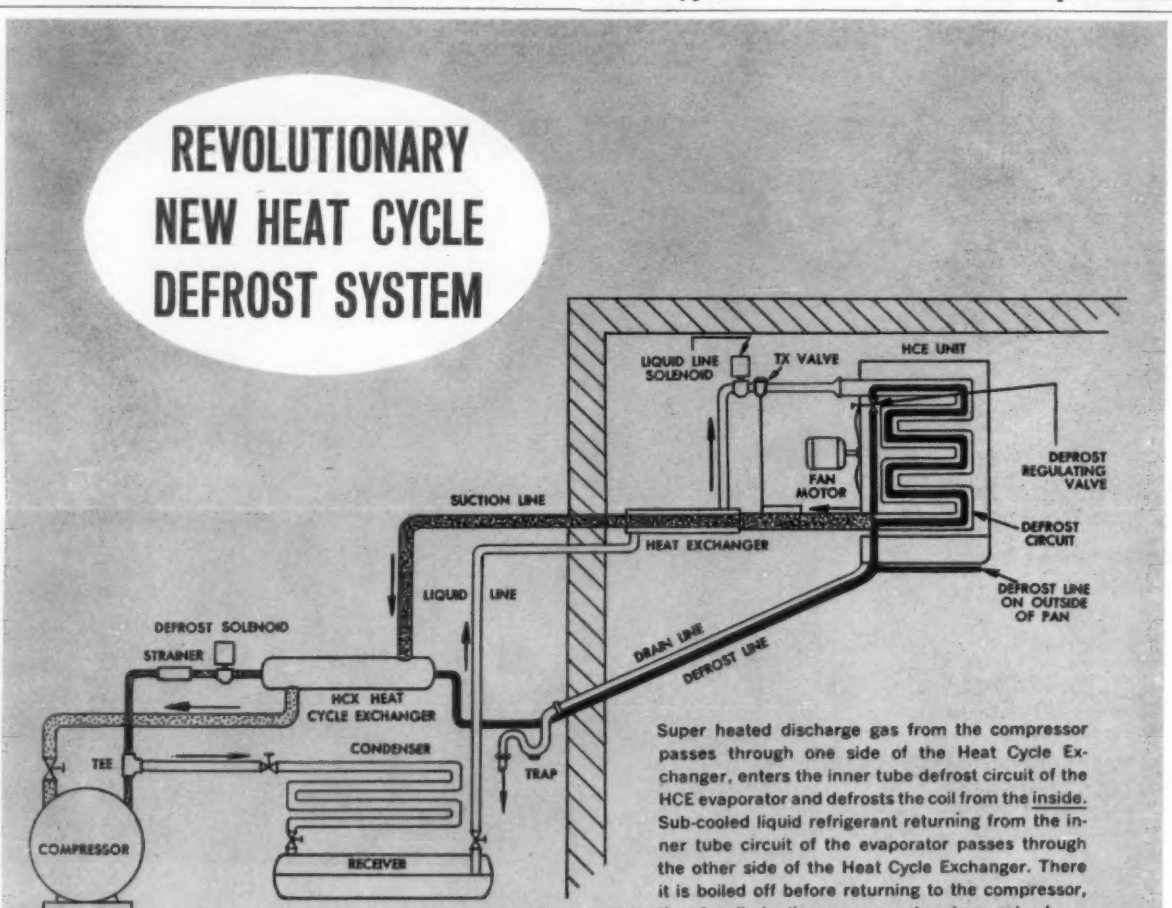
To Study Aid For Small Firms

ST. JOSEPH, Mich.—Over 27 top management executives of leading American companies will meet at the Whirlpool Corp. administrative headquarters here on Nov. 16 for what is described as the nation's first privately-sponsored conference on providing management assistance to small business.

The one-day session will be devoted to reports from companies which have been outstandingly successful in developing and conducting programs to help suppliers, retailers, wholesalers, and other small businesses improve their operations and management skills.

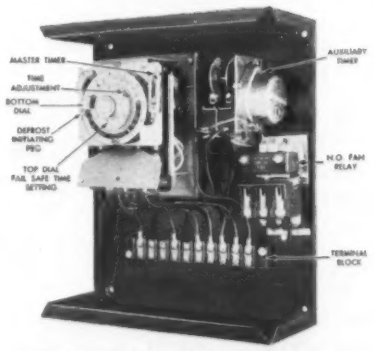
A primary purpose of the meeting will be to explore the possibility of providing expanded and improved management.

REVOLUTIONARY NEW HEAT CYCLE DEFROST SYSTEM



Super heated discharge gas from the compressor passes through one side of the Heat Cycle Exchanger, enters the inner tube defrost circuit of the HCE evaporator and defrosts the coil from the inside. Sub-cooled liquid refrigerant returning from the inner tube circuit of the evaporator passes through the other side of the Heat Cycle Exchanger. There it is boiled off before returning to the compressor, thereby eliminating consequent motor overload.

When defrosting is complete, a temperature sensitive switch terminates the defrost cycle.



PRE-WIRED CONTROL PACKAGE
TIME-TEMPERATURE TERMINATION

- TIME INITIATED—TEMPERATURE TERMINATED—
- PREVENTS RETURN OF LIQUID TO COMPRESSOR.
- ELIMINATES MOTOR OVERLOADING (Resulting from high back pressure).

Here at last is a simple, sensible low temperature defrost system! The Dunham-Bush 'HC' Heat Cycle Defrost System—combining an HCE Inner-Fin Evaporator with a specially engineered HCX Heat Cycle Exchanger and a defrost kit—is fast, safe, efficient . . . eliminates unnecessary room temperature rise during defrost cycle. Capacities from 4,500 to 72,000 BTU/hr @ 10° T.D. Request Bulletin #5026.

IF ELECTRIC DEFROST IS PREFERABLE NEW DUNHAM-BUSH 'ED' SYSTEM NOW AVAILABLE

'ED' Electric Defrost Systems feature exclusive Inner-Fin coil construction of evaporator specially designed heater cable and new completely automatic time initiated—temperature terminated control package. Models from 4,500 to 72,000 BTU/hr @ 10° T.D.

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